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ZOOPLANKTON VOLUMES OFF THE PACIFIC COAST, 1958

by

James R. Thrailkill

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ABSTRACT

Basic data on volumes of zooplankton off the Pacific coast in 1958 are given, together with haul data for all plankton hauls taken on survey cruises of the California Cooperative Oceanic Fisheries Investigations. Plankton volumes over the entire survey area averaged less than one-third as much as during 1951-56. Distribution charts showing relative areal zooplankton abundance by month are included.

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Since 1949, information on zooplankton volumes obtained on CalCOFI cruises has been published annually. Eight papers have appeared in this series, six published under the authorship of "Staff of the South Pacific Fishery Investigations" and two (1957 and 1959) under the authorship of James R. Thrailkill. Thrailkill (1956) illustrated monthly plankton distributions for 1949 through 1955. Distribution charts have been included in subsequent reports.

The investigation of zooplankton volumes off the Pacific coast is a part of the California Cooperative Oceanic Fisheries Investigations (CalCOFI). This research is sponsored by the Marine Research Committee and carried out cooperatively by the Scripps Institution of Oceanography of the University of California, the Pelagic Fish Investigations of the California Department of Fish and Game, the California Academy of Sciences, the Hopkins Marine Station of Stanford University, and the U.S. Bureau of Commercial Fisheries Biological Laboratory, La Jolla, California. The plankton collections are obtained on oceanographic-biological survey cruises made on vessels operated by Scripps Institution of Oceanography and the U.S. Bureau of Commercial Fisheries, Biological Laboratory, La Jolla.

The plankton samples are used by the Bureau of Commercial Fisheries in studying the early life history of commercially important, or potentially important fishes, including their distribution, abundance and rate of survival. Scripps Institution of Oceanography also makes use of the samples in studies of productivity and zoogeography.

Vessels participating in CalCOFI cruises of 1958 (table 1) included five operated by the Scripps Institution of Oceanography and one, the ***Black Douglas***, operated by the Bureau of Commercial Fisheries. The stations occupied during 1958 are shown in fig. 1. A chronological list of the survey cruises made in 1958, including the area covered and the number of stations occupied on each, is given in table 2.

The plankton collecting equipment and the procedures employed in taking hauls were standard on all vessels. The nets, constructed of No. 30xxx grit gauze (a heavy-duty grade of silk bolting cloth) were 1 meter in diameter at the mouth and about 5 meters in length. All plankton hauls were taken obliquely from a depth

Note.--James R. Thrailkill, Fishery Research Biologist, Bureau of Commercial Fisheries, U. S. Fish and Wildlife Service, La Jolla, California.

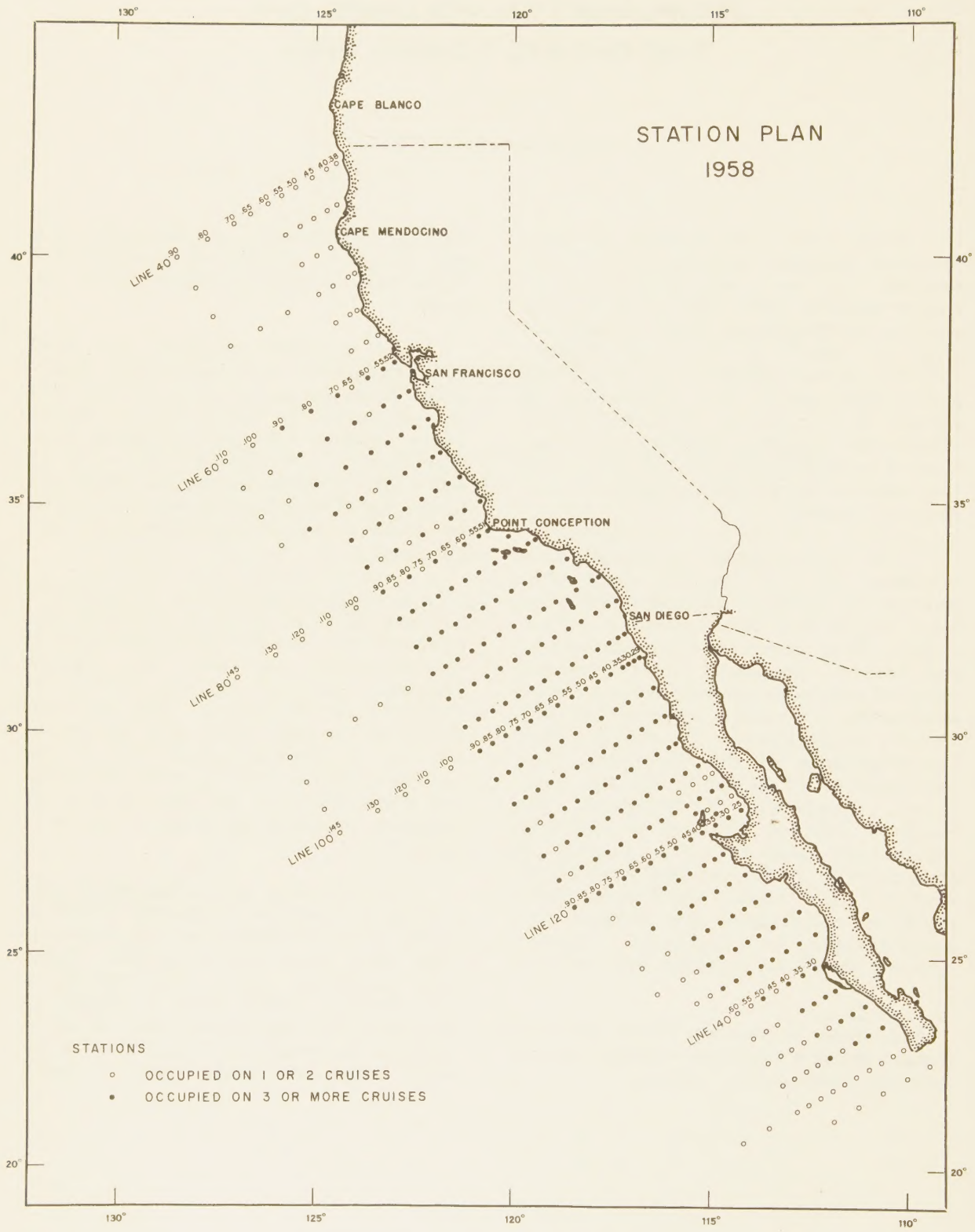

Figure 1.--Stations occupied on California Cooperative Oceanic Fisheries Investigations cruises during 1958.

Table 1. Research vessels participating in CalCOFI survey cruises, 1958.

Month	Cruise number	Number vessels	BLACK DOUGLAS	SPENCER F. BAIRD	HORIZON	STRANGER	PAOLINA T.	ORCA
January	5801	3	X	--	--	X	X	--
February	5802	2	--	--	--	X	X	--
March	5803	2	X	--	--	X	--	--
April	5804	4	X	X	--	X	X	--
May	5805	3	X	--	--	X	X	--
June	5806	3	X	--	--	X	--	X
July	5807	4	X	--	--	X	X	X
August	5808	1	X	--	--	--	--	--
September	5809	2	X	--	--	--	--	X
October	5810	4	X	--	X	X	X	--
November	5811	1	--	--	--	--	X	--
December	5812	1	--	--	--	--	--	X

Table 2. Area covered and number of stations occupied on the monthly CalCOFI cruises during 1958.

Month	Cruise number	Area covered station lines	Number of stations occupied
January	5801	60-157	150
February	5802	80-150	132
March	5803	70-150	159
April	5804	60-137	268
May	5805	60-137	232
June	5806	50-137	212
July	5807	40-137	273
August	5808	110-137	37
September	5809	110-137	34
October	5810	60-153	250
November	5811	80-100	42
December	5812	80-100	45

of approximately 140 meters to the surface, except in shallow water.

The volume of plankton in each sample was determined by displacement as follows: The plankton was separated from its preserving liquid (3 percent formalin) by filtering, allowed to drain, then placed into a graduated cylinder to which was added a known volume of 3 percent formalin. Two volumes were obtained for each sample: (1) the total volume of all plankton material and (2) the volume of smaller organisms after removal of larger organisms, such as jellies, fish, squid, salps, pyrosomes, larger mollusks and larger crustaceans. Our criterion for a "larger" organism (except juvenile or adult fish) was one whose volume, as an individual, exceeded 5 cubic centimeters.

The major table in this report contains both the standardized wet plankton volume for each sample taken on routine cruises off the Pacific coast during 1958 (columns 9 and 10) and the basic information on each haul, including station number (column 1), location (columns 2 and 3), date and time of collection (columns 4, 5, and 6), volume of water strained (column 7) and the estimated depth of haul (column 8).

The average plankton volume at each station during the year is shown in figure 3. The distribution and abundance of the smaller organisms on each survey cruise are shown in figures 4 through 15. For maximum contrast, five categories of abundance are used: (1) light, 0-33 cc. of plankton, (2) moderate, 34-100 cc. of plankton, (3) average, 101-300 cc. of plankton, (4) fairly heavy, 301-900 cc. of plankton, and (5) heavy, more than 900 cc. of plankton.

Only data collected from 1951 to 1957 are used in computing long-term averages for comparative purposes. The tows of 1949 and 1950 are not included in averages because they covered only half the depth range of subsequent tows, i.e., 70 meters to the surface.

The area most consistently occupied lies between station lines 80 and 137 (fig. 1). For convenience in comparing 1958 plankton volumes with those of earlier years, this area has been divided into two roughly equal parts (lines 80-107 and lines 110-137). The northern area (lines 80-107) was occupied at monthly intervals from January through July, and October through December. The southern area (lines 110-137) was occupied at monthly intervals from January through October.

The average monthly plankton volumes for the area encompassed by lines 80-107 during 1951 through 1958 are given in table 3. The months of August and September are not included in this table, since cruises were not made in the area during these months in recent years. Except for July and December, the monthly averages during 1958 were smaller than during any of the preceding years. Similar information for the southern area (lines 110-137) is given in table 4. Because coverage of this area during November and December was discontinued after 1955, these months have been omitted from the table.

A comparison of plankton volumes in 1958, by month and area, with the average volume of the 6-year period, 1951-56, and also with 1957, is graphically presented in fig. 2. The transition from the high volume year to low volume year is best shown by treating both 1957 and 1958 volumes separately.

In the northern area (lines 80-107) volumes during the 6-year period (1951-56) built-up to a peak in July and then receded. During 1957, volumes obtained during February through April were unusually large for these months but markedly declined thereafter giving the appearance of a summer minimum. The pattern during 1958 was similar to the 6-year period, but on a very reduced scale, since plankton volumes averaged only one-third as large. The peak month was again July.

The seasonal pattern of plankton abundance in the southern area (lines 110-137) has been somewhat similar, but the peak month has been more variable. The volumes during 1958 were fairly uniform throughout the year and were the smallest on record for the months of May through October.

The author acknowledges with pleasure the cooperation given by Scripps Institution of Oceanography in the collection of data at sea. Most personnel of the Bureau of Commercial Fisheries, Biological Laboratory, La Jolla, California, contributed to the collection, standardization and processing of plankton material.

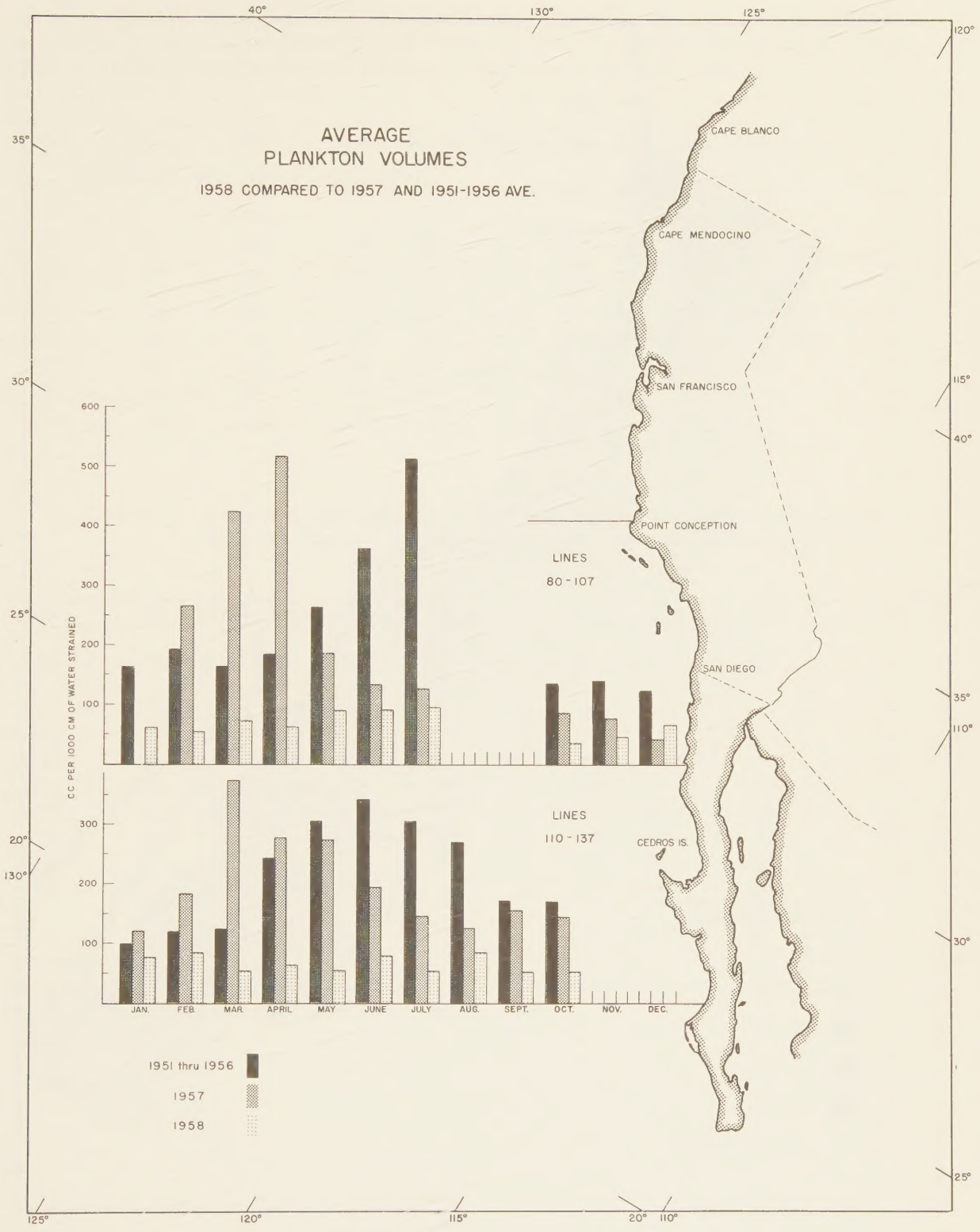

Figure 2.--Average plankton volumes in 1958 compared with average volumes 1951-1956, and average volumes in 1957, by month and area.

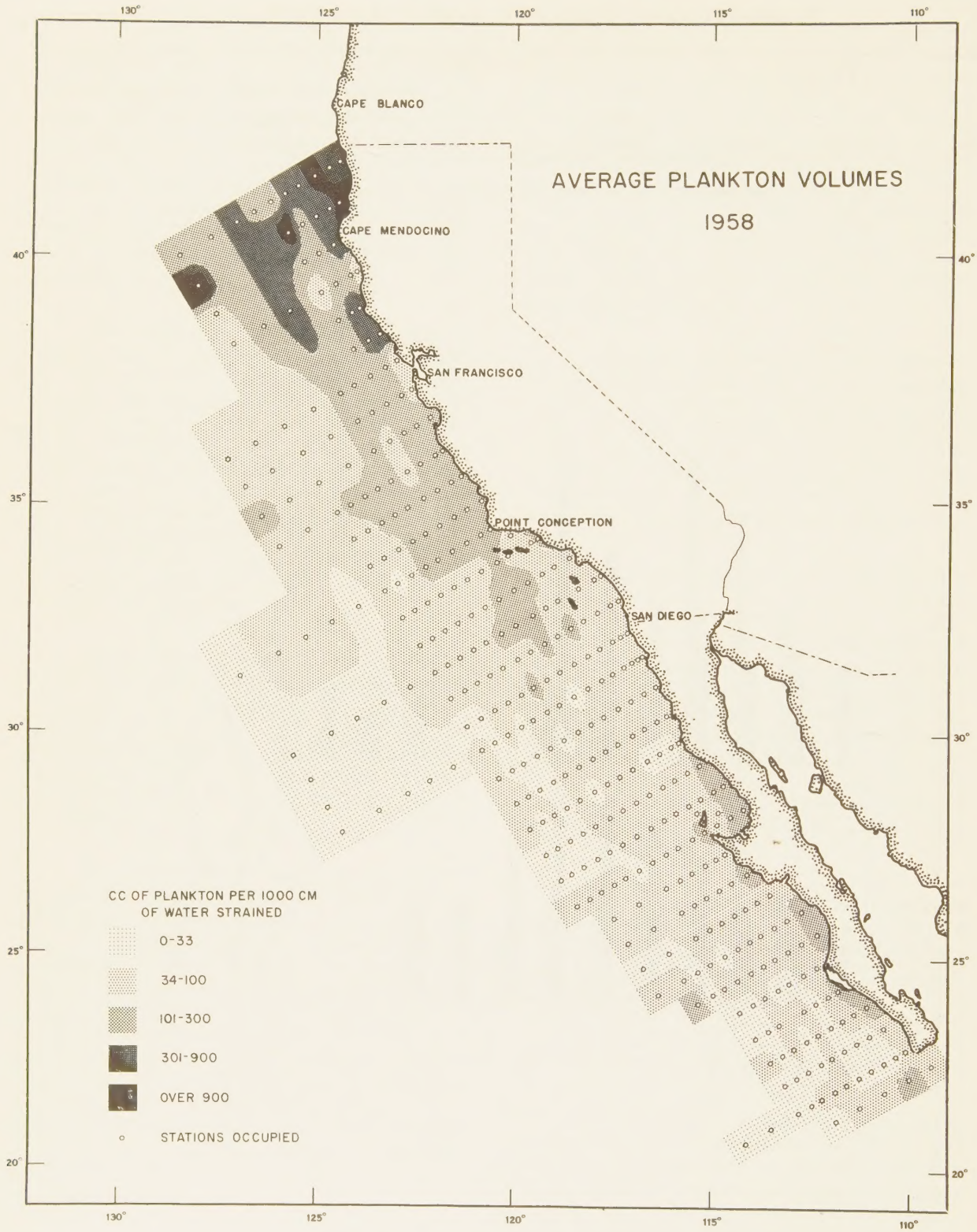

Figure 3.--Average plankton volumes, 1958.

Table 3. Average monthly plankton volumes in the area off southern California and adjacent northern Baja California (lines 80-107) for the months of January through July and October through December, 1951-1958.

Year	Jan.	Feb.	Mar.	April	May	June	July	Oct.	Nov.	Dec.
1951-56 ave.	163	193	166	185	264	362	514	137	142	124
1951	198	140	98	133	143	187	70	68	73	60
1952	109	317	205	151	152	228	234	130	95	Not occ.*
1953	122	150	247	231	448	621	1369	129	121	92
1954	97	199	144	134	193	331	255	147	Not occ.	95
1955	102	157	135	195	230	353	350	114	Not occ.	202
1956	351	195	169	264	420	453	808	234	278	173
1957	Not occ.	267	424	518	188	134	128	87	78	42
1958	61**	53	72	62	90	91	97	36	46	66

Table 4. Average monthly plankton volumes in the area off central Baja California (lines 110-137) for the months of January through October, 1951-1958.

Year	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.
1951-56 ave.	100	120	124	244	305	342	306	271	171	171
1951	50	55	50	62	85	104	85	140	124	191
1952	81	69	123	122	128	159	311	392	233	107
1953	75	101	142	182	223	295	232	276	134	181
1954	75	101	69	197	130	178	178	171	Not occ.	186
1955	101	138	146	503	630	492	289	Norpac***	Norpac	188
1956	219	258	214	395	632	824	743	374	192	Not occ.
1957	121	183	375	279	275	195	147	126	158	146
1958	78	83	54	63	55*	80	55	86	52	52

* Not occupied.

** Volumes for 1958 are underlined when they are the lowest in the series of eight years.

*** An oceanographic survey of the North Pacific Ocean.

Earlier publications in this series are as follows:

STAFF, SOUTH PACIFIC FISHERY INVESTIGATIONS.

1952. Zooplankton volumes off the Pacific coast, 1951. U. S. Fish and Wildlife Service, Spec. Sci. Rept.--Fisheries No. 73, 37 pp.

1953. Zooplankton volumes off the Pacific coast, 1952. U. S. Fish and Wildlife Service, Spec. Sci. Rept.--Fisheries No. 100, 41 pp.

1954. Zooplankton volumes off the Pacific coast, 1949-50. U. S. Fish and Wildlife Service, Spec. Sci. Rept.--Fisheries No. 125, 54 pp.

1954. Zooplankton volumes off the Pacific coast, 1953. U. S. Fish and Wildlife Service, Spec. Sci. Rept.--Fisheries No. 132, 38 pp.

1955. Zooplankton volumes off the Pacific coast, 1954. U. S. Fish and Wildlife service, Spec. Sci. Rept.--Fisheries No. 161, 35 pp.

1956. Zooplankton volumes off the Pacific coast, 1955. U. S. Fish and Wildlife Service, Spec. Sci. Rept.--Fisheries No. 177, 31 pp.

THRAILKILL, JAMES R.

1956. Relative areal zooplankton abundance off the Pacific coast. U. S. Fish and Wildlife Service, Spec. Sci. Rept.--Fisheries No. 188, 85 pp.

1957. Zooplankton volumes off the Pacific coast, 1956. U. S. Fish and Wildlife Service, Spec. Sci. Rept.--Fisheries No. 232, 50 pp.

1959. Zooplankton volumes off the Pacific coast, 1957. U. S. Fish and Wildlife Service, Spec. Sci. Rept.--Fisheries No. 326, 57 pp.

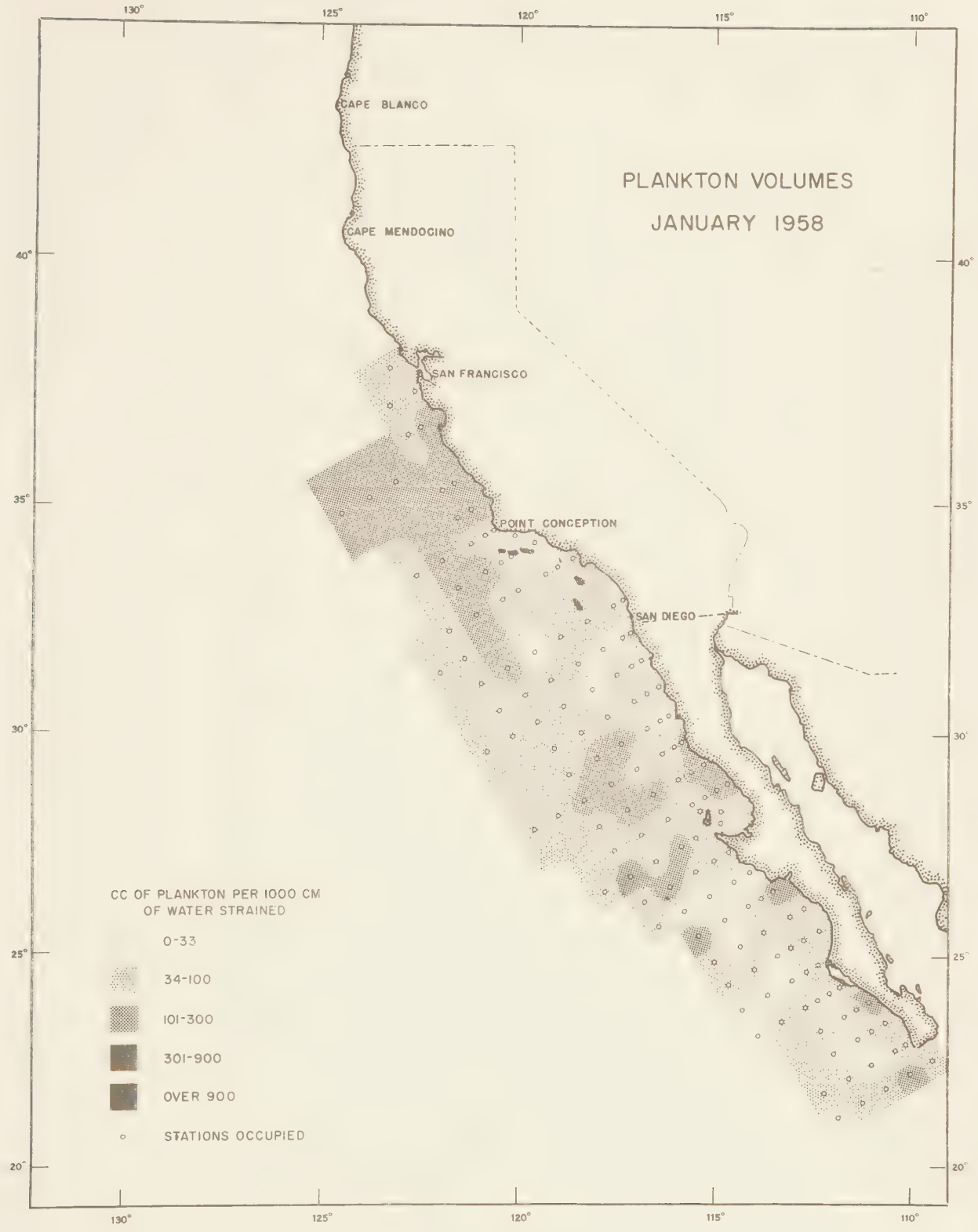

Figure 4.--Plankton volumes, January 1958.

Plankton Volumes, Cruise 5801, January 1958

Position				Time (PST)		Vol. water strained	Depth of haul in	Vol. per 1000 C.M. strained	
			(1958)					Total	Sm. org.
Sta.	N. lat.	W. long.	Date	Start	End	C.M.	meters	cc.	cc.
60.55	37°47.5'	123°15'	I-13	1821	1835	500	0-144	70	70
63.52	37°19'	122°36'	I-15	2138	2147	317	0-88	211	54
63.60	37°02.5'	123°11.5'	I-16	0211	0226	483	0-142	87	87
67.55	36°39'	122°26'	I-9	0840	0856	545	0-138	143	143
67.60	36°29'	122°47.5'	I-9	1341	1355	490	0-144	53	53
70.70	35°32'	121°17'	I-17	0805	0822	524	0-139	309	137
70.80	35°13'	123°48'	I-17	0205	0221	426	0-157	204	204
70.90	34°53'	124°30'	I-16	1935	1950	537	0-143	175	175
73.55	35°27.5'	121°37.5'	I-19	1326	1341	514	0-138	113	113
73.60	35°17'	121°57'	I-19	1026	1040	512	0-137	137	137
77.55	34°54.5'	121°13'	I-19	0046	0101	446	0-138	255	255
77.60	34°44'	121°34'	I-19	0456	0510	472	0-137	159	159
80.51	34°26.5'	120°32.5'	I-19	2302	2313	415	0-101	77	77
80.55	34°19'	120°48'	I-20	0136	0150	507	0-138	71	71
80.60	34°09'	121°09'	I-20	0506	0520	452	0-142	66	66
80.70	33°47'	121°52'	I-20	1211	1226	470	0-142	247	247
80.80	33°29'	122°32'	I-20	1716	1730	484	0-144	79	79
82.47	34°13'	119°58'	I-31	0726	0740	497	0-129	24	24
83.43	34°08'	119°34'	I-31	1021	1035	491	0-113	18	18
83.51	33°52'	120°08.5'	I-31	0328	0341	406	0-120	20	20
83.55	33°44'	120°24.5'	I-31	0036	0050	448	0-139	60	60
83.60	33°34'	120°45'	I-30	2056	2111	448	0-136	116	116
83.70	33°17'	121°21'	I-30	1501	1516	453	0-138	201	201
87.35	33°50'	118°37.5'	I-31	1636	1651	507	0-120	47	47
87.40	33°40'	118°58.5'	I-31	1921	1935	478	0-128	29	29
87.45	33°30'	119°19'	I-31	2326	2340	482	0-130	52	52
87.55	33°10'	120°00.5'	II-1	0436	0451	470	0-136	51	51
87.60	33°00'	120°21.5'	II-1	0826	0840	435	0-135	55	55
87.70	32°39.5'	121°02'	II-1	1306	1321	466	0-139	107	107
87.80	32°19.5'	121°43'	II-1	1756	1811	421	0-132	48	48
90.80	31°45'	121°19'	II-2	0706	0720	483	0-130	46	46
90.90	31°25'	121°59'	II-2	0206	0220	447	0-139	85	85
93.27	32°55'	117°20'	I-29	1523	1530	246	0-74	28	28
93.30	32°50'	117°33'	I-29	1746	1800	416	0-140	41	41
93.40	32°31'	118°15'	I-30	0001	0016	425	0-145	38	38
93.50	32°13'	118°55'	I-30	0611	0625	463	0-134	39	39
93.60	31°53'	119°40'	I-30	1226	1240	375	0-131	5	5
93.70	31°32'	120°16'	I-30	1816	1831	520	0-134	131	131

Plankton Volumes, Cruise 5801, January 1958 (cont'd)

Position				Time (PST)		Vol. water strained	Depth of haul in	Vol. per 1000 C.M. strained	
			(1958)					Total	Sm. org.
Sta.	N. lat.	W. long.	Date	Start	End	C.M.	meters	cc.	cc.
93.80	31°04'	120°50'	I-31	0026	0040	406	0-144	57	57
97.30	32°15'	117°08'	II-1	1509	1513	149	0-27	40	40
97.32	32°11.5'	117°17'	II-1	1306	1321	479	0-123	17	17
97.40	32°00'	117°40'	II-1	0926	0940	440	0-136	14	14
97.50	31°37'	118°27'	II-1	0256	0311	432	0-139	37	37
97.60	31°08'	119°07'	I-31	2016	2030	430	0-138	58	58
97.70	30°39'	119°48'	I-31	1316	1331	417	0-140	60	60
97.80	30°17'	120°25'	I-31	0656	0710	406	0-142	91	91
100.30	31°41'	116°46.5'	I-13	2046	2101	493	0-126	14	14
100.32	31°37'	116°54.5'	I-13	2256	2310	444	0-134	38	38
100.40	31°21'	117°27'	I-14	0446	0500	404	0-137	54	54
100.50	31°01'	118°07.5'	I-14	1136	1151	398	0-142	33	33
100.60	30°41'	118°47'	I-14	1856	1910	437	0-135	55	55
100.70	30°20'	119°26'	I-15	0356	0411	422	0-135	40	40
100.80	29°58.5'	120°05.7'	I-15	0956	1010	407	0-140	42	42
100.90	29°39'	120°43'	I-15	1736	1750	416	0-134	43	43
103.30	31°05'	116°25'	I-17	0808	0815	215	0-58	70	70
103.35	31°00.5'	116°39.5'	I-17	0506	0520	431	0-135	37	37
103.40	30°48'	117°01.5'	I-17	0056	0110	472	0-124	34	34
103.50	30°24'	117°42.5'	I-16	1836	1850	424	0-132	94	94
103.60	30°07.5'	118°21'	I-16	1226	1241	442	0-131	63	63
103.70	29°46.5'	119°04.5'	I-16	0601	0615	422	0-137	59	59
107.32	30°23.5'	116°10.5'	I-17	1351	1405	487	0-118	31	31
107.35	30°20'	116°23'	I-17	1746	1801	439	0-130	20	20
107.40	30°10'	116°43'	I-17	2106	2121	446	0-133	90	90
107.50	29°50'	117°23.5'	I-18	0311	0325	399	0-144	110	110
107.60	29°32'	118°01.5'	I-18	0956	1010	458	0-129	131	131
107.70	29°10'	118°42'	I-18	1756	1810	432	0-141	83	83
110.33	29°50'	115°52'	I-21	1148	1156	264	0-84	102	102
110.35	29°46.5'	115°59'	I-21	0956	1010	412	0-141	78	78
110.40	29°42.5'	116°19'	I-21	0716	0730	439	0-138	68	68
110.50	29°19'	117°00'	I-21	0026	0041	463	0-131	82	82
110.60	28°57'	117°40'	I-20	1756	1810	476	0-130	183	183
110.70	28°38'	118°18'	I-19	1836	1850	460	0-128	126	126
110.80	28°19'	118°55.5'	I-19	1236	1250	463	0-130	63	63
110.90	27°55.5'	119°32.5'	I-19	0556	0610	392	0-148	82	82
113.30	29°23'	115°17.5'	I-21	1729	1734	186	0-27	139	139
113.35	29°12.5'	115°41'	I-21	2056	2110	422	0-132	104	104
113.40	29°03'	116°04'	I-22	0326	0340	490	0-114	73	73

Plankton Volumes, Cruise 5801, January 1958 (cont'd)

Position				Time (PST)		Vol. water strained	Depth of haul in	Vol. per 1000 C.M. strained	
			(1958)					Total	Sm. org.
Sta.	N. lat.	W. long.	Date	Start	End	C.M.	meters	cc.	cc.
113.50	28°41'	116°30'	I-22	0956	1011	417	0-141	149	149
113.60	28°20.5'	117°20.5'	I-22	1651	1705	445	0-127	108	108
113.70	28°04.5'	117°51'	I-22	2226	2240	437	0-141	48	48
117.26	28°56'	114°41'	I-25	0408	0415	198	0-62	131	131
117.30	28°48'	114°56'	I-25	0108	0117	390	0-59	138	138
117.35	28°38'	115°16'	I-24	2211	2225	456	0-133	81	81
117.40	28°27'	115°35'	I-23	2216	2230	445	0-134	72	72
117.50	28°06.5'	116°13.5'	I-23	1616	1630	437	0-138	85	85
117.60	27°49'	116°50'	I-23	1106	1120	404	0-142	59	59
117.70	27°32.5'	117°33'	I-23	0426	0441	441	0-136	54	54
118.39	28°18.5'	115°24.5'	I-24	1811	1825	441	0-141	89	89
119.33	28°19'	114°53'	I-27	0157	0208	322	0-95	62	62
120.35	28°03'	114°54'	I-26	2343	2350	212	(0-74)	38	38
120.45	27°40'	115°28'	I-25	1821	1836	454	0-136	84	84
120.50	27°30'	115°49'	I-25	1526	1540	449	0-133	143	143
120.60	27°13'	116°31'	I-25	1016	1030	377	0-138	66	66
120.70	26°52.5'	117°10'	I-25	0516	0531	421	0-141	107	107
120.80	26°32.5'	117°48.5'	I-25	0026	0040	455	0-135	84	84
123.37	27°24'	114°40'	I-24	0058	0104	224	0-44	45	45
123.42	27°16'	114°59'	I-24	0316	0330	401	0-142	70	70
123.50	27°00'	115°32'	I-24	0741	0756	394	0-155	66	66
123.60	26°42'	116°10'	I-24	1326	1340	446	0-141	260	260
123.70	26°18.5'	116°54'	I-24	1826	1841	424	0-142	61	61
127.34	26°58'	114°10'	I-23	2043	2051	266	0-87	30	30
127.40	26°45'	114°34'	I-23	1651	1706	427	0-147	21	21
127.50	26°23'	115°07'	I-23	1156	1210	448	0-141	27	27
127.60	26°04'	115°45'	I-23	0746	0800	468	0-134	19	19
127.70	25°44'	116°25'	I-23	0241	0255	479	0-139	67	67
130.30	26°28.5'	113°30'	I-22	0313	0320	215	0-60	130	130
130.35	26°19'	113°49'	I-22	0546	0601	441	0-142	36	36
130.40	26°10'	114°07'	I-22	0851	0905	451	0-137	16	16
130.50	25°51'	114°45'	I-22	1341	1356	437	0-133	9	9
130.60	25°32'	115°24'	I-22	1841	1856	435	0-143	177	177
133.25	26°09'	112°51'	I-21	2243	2250	244	0-55	70	70
133.30	25°59'	113°10'	I-21	1946	2001	484	0-127	54	54
133.40	25°39'	113°48.5'	I-21	1441	1456	486	0-134	35	35
133.50	25°19'	114°26'	I-21	1011	1026	422	0-137	19	19
133.60	24°57'	115°03'	I-21	0511	0526	459	0-135	37	37
137.23	25°34'	112°19'	I-20	0608	0616	316	0-53	82	82

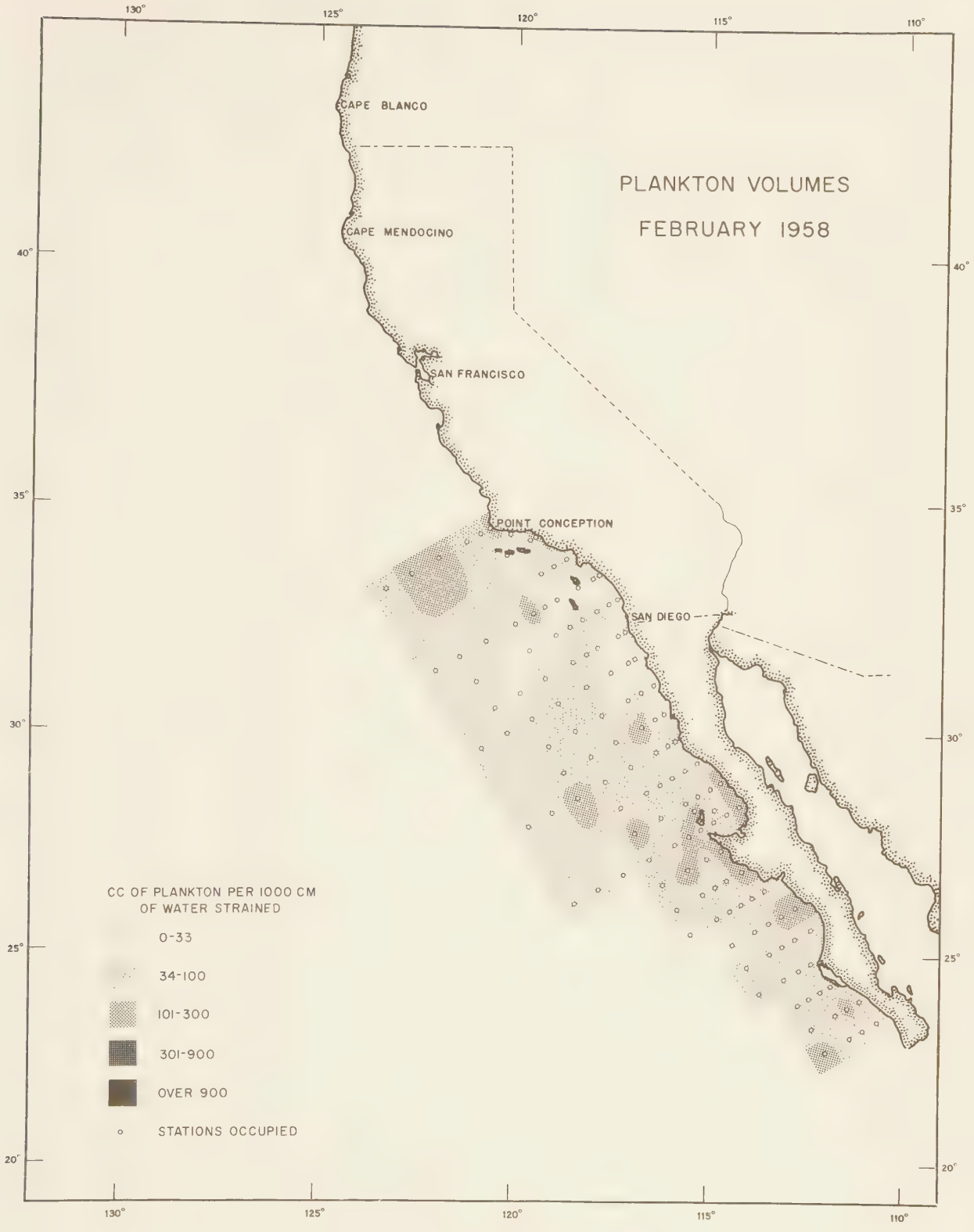

Figure 5.--Plankton volumes, February 1958.

Plankton Volumes, Cruise 5801, January 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
137.30	25°19'	112°46'	I-20	0906	0920	435	0-138	64	64
137.35	25°10'	113°04'	I-20	1201	1216	501	0-124	44	44
137.40	24°57'	113°29'	I-20	1451	1505	468	0-137	21	21
137.50	24°41'	114°03'	I-20	1926	1941	479	0-140	58	58
137.60	24°23'	114°40'	I-21	0021	0035	482	0-136	58	58
140.30	24°49'	112°29'	I-20	0057	0108	373	0-102	89	89
140.35	24°41'	112°47'	I-19	2216	2231	498	0-113	54	54
140.40	24°29'	113°11'	I-19	1811	1826	492	0-130	22	22
140.50	24°07'	113°41'	I-19	1336	1350	452	0-140	18	18
140.60	23°46'	114°16'	I-19	0906	0921	488	0-126	27	27
143.26	24°19'	111°48'	I-18	0918	0925	252	0-50	79	79
143.30	24°11'	112°03'	I-18	1126	1141	439	0-136	18	18
143.35	24°01'	112°22'	I-18	1406	1420	488	0-136	18	18
143.40	23°51'	112°47'	I-18	1826	1841	508	0-121	53	53
143.50	23°31'	113°15'	I-18	2216	2231	463	0-135	56	56
143.60	23°13'	113°51'	I-19	0256	0310	478	0-131	31	31
147.20	24°07'	111°20'	I-17	0457	0508	380	0-113	274	274
147.25	23°56'	111°35'	I-17	0216	0230	498	0-134	52	52
147.30	23°43'	111°52'	I-17	2316	2331	440	0-140	23	23
147.40	23°18'	112°27'	I-16	1741	1756	557	0-123	83	83
150.19	23°23'	110°39'	I-16	0026	0040	455	0-123	40	40
150.25	23°13'	111°02'	I-16	0341	0356	412	0-144	44	44
150.30	23°03'	111°21'	I-16	0706	0721	434	0-147	16	16
150.40	22°44'	112°00'	I-16	1221	1235	468	0-139	17	17
153.16	22°55'	110°07'	I-15	2011	2026	507	0-135	53	53
153.20	22°47'	110°22'	I-15	1546	1601	453	0-142	18	18
153.30	22°27'	110°59'	I-15	1026	1041	411	0-135	24	24
153.40	22°06'	111°36'	I-15	0426	0440	531	0-117	58	58
153.50	21°46'	112°14'	I-14	2316	2330	561	0-121	39	39
157.10	22°33'	109°23'	I-13	2136	2151	450	0-149	49	49
157.20	22°13'	110°00'	I-14	0236	0250	387	0-147	196	196
157.30	21°52'	110°38'	I-14	0726	0740	491	0-117	75	75
157.40	21°32.5'	111°14.5'	I-14	1226	1240	462	0-136	39	39
157.50	21°12'	111°52'	I-14	1721	1736	484	0-127	21	21

Plankton Volumes, Cruise 5802, February 1958

80.51	34°26.3'	120°31.9'	II-10	1108	1115	243	0-55	164	164

Plankton Volumes, Cruise 5802, February 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
80.55	34°18.8'	120°48.3'	II-10	0756	0811	462	0-146	65	65
80.60	34°11.5'	121°03'	II-10	0451	0506	455	0-139	79	79
80.70	33°51'	121°52.8'	II-9	2311	2325	467	0-132	141	141
80.80	33°31'	122°40.2'	II-9	1726	1740	446	0-146	121	121
80.90	33°16.3'	123°15'	II-9	1146	1200	490	0-131	45	45
82.47	34°16.3'	119°55'	II-10	1526	1540	480	0-145	54	54
83.40	34°14'	119°22.4'	II-10	2014	2017	97	0-16	103	103
83.43	34°07.8'	119°34'	II-10	1811	1826	424	0-148	35	35
83.51	33°52'	120°08.5'	II-11	0338	0346	333	0-50	30	30
87.35	33°50'	118°38.5'	II-12	0241	0255	482	0-131	35	35
87.40	33°40.3'	118°59'	II-11	2341	2356	492	0-131	57	57
87.45	33°29.1'	119°18.8'	II-11	2101	2115	425	0-123	49	49
90.28	33°28.5'	117°46.7'	II-6	2226	2240	468	0-133	43	43
90.30	33°23.8'	117°57'	II-7	0016	0030	440	0-128	23	23
90.37	33°11'	118°23.5'	II-7	0436	0450	512	0-131	21	21
90.45	32°55.7'	118°56'	II-7	1006	1020	466	0-136	19	19
90.50	32°44.8'	119°16.5'	II-7	1411	1425	486	0-133	16	16
90.55	32°35.7'	119°37.8'	II-7	1726	1741	459	0-139	157	157
90.60	32°26.5'	119°59'	II-7	2126	2140	433	0-139	51	51
90.70	32°07.8'	120°40.3'	II-8	0351	0405	495	0-129	77	77
90.80	31°44.8'	121°19'	II-8	1016	1031	496	0-134	54	54
90.90	31°17'	121°56.8'	II-8	1656	1710	438	0-151	64	64
93.27	32°56'	117°19'	II-13	1502	1515	364	0-89	33	33
93.30	32°50'	117°31.5'	II-13	1711	1725	428	0-147	23	23
93.35	32°40'	117°52'	II-13	2026	2040	455	0-141	40	40
93.40	32°30'	118°12.5'	II-13	2341	2355	456	0-148	35	35
93.45	32°20'	118°32.5'	II-14	0301	0316	444	0-138	56	56
93.50	32°11.5'	118°54'	II-14	0616	0630	460	0-148	28	28
93.60	31°53'	119°33'	II-14	1111	1126	452	0-139	29	29
93.70	Occupied. Sample not quantitative								
93.80	31°07'	120°52'	II-14	2226	2240	464	0-130	37	37
97.30	32°15.5'	117°07'	II-16	0829	0833	146	0-31	48	48
97.32	32°13'	117°16.5'	II-16	0701	0716	498	0-131	20	20
97.40	31°57.5'	117°46'	II-16	0256	0310	450	0-138	31	31
97.45	31°36'	118°09'	II-15-16	2356	0011	478	0-137	40	40
97.50	31°35.5'	118°30'	II-15	2111	2126	475	0-136	38	38
97.60	31°18'	119°07'	II-15	1541	1555	456	0-135	48	48
97.70	30°53.5'	119°47'	II-15	0941	0956	454	0-138	11	11
97.80	30°34'	120°27.5'	II-15	0336	0350	448	0-138	94	94

Plankton Volumes, Cruise 5802, February 1958 (cont'd)

Position				Time (PST)		Vol. water strained	Depth of haul in	Vol. per 1000 C.M. strained	
			(1958)					Total	Sm. org.
Sta.	N. lat.	W. long.	Date	Start	End	C.M.	meters	cc.	cc.
100.30	31°40.5'	116°46.5'	II-16	1321	1335	445	0-131	18	18
100.32	31°37.8'	116°57.7'	II-16	1446	1500	438	0-140	14	14
100.40	31°21'	117°27'	II-16	1916	1931	454	0-129	26	26
100.50	31°00'	118°07'	II-17	0046	0100	490	0-117	43	43
100.60	30°38.5'	118°46'	II-17	0616	0630	440	0-136	39	39
100.70	30°18'	119°24.5'	II-17	1156	1211	503	0-112	79	79
100.80	30°01'	120°07'	II-17	1641	1656	444	0-139	74	74
100.90	29°41'	120°46'	II-17	2156	2210	440	0-136	45	45
103.30	31°03.2'	116°24.5'	II-19	0643	0650	222	0-78	23	23
103.35	30°53.7'	116°43'	II-19	0401	0415	418	0-146	36	36
103.40	30°43.1'	117°04.5'	II-19	0056	0110	477	0-132	19	19
103.50	30°27'	117°45'	II-18	1926	1940	456	0-138	39	39
103.60	30°08'	118°25.5'	II-18	1406	1420	473	0-126	99	99
103.70	29°43'	119°03'	II-18	0901	0915	441	0-134	77	77
107.32	30°28'	116°12'	II-24	0926	0941	382	0-140	24	24
107.35	30°21.5'	116°24'	II-24	0746	0801	481	0-124	23	23
107.40	30°10'	116°43'	II-24	0426	0441	404	0-128	176	151
107.50	29°50.5'	117°23.5'	II-23	2346	2400	455	0-132	92	92
107.60	29°31'	118°03'	II-23	1916	1930	423	0-122	68	45
107.70	29°10'	118°44'	II-23	1426	1440	425	0-135	66	66
110.33	29°50.5'	115°52.2'	II-22	0208	0216	222	0-62	72	72
110.35	29°46.5'	116°00'	II-22	0326	0340	467	0-128	58	58
110.40	29°36.5'	116°19.5'	II-22	0556	0611	443	0-125	68	68
110.50	29°16.5'	116°59'	II-22	0951	1005	440	0-126	68	68
110.60	28°56.5'	117°39'	II-22	1521	1536	486	0-117	68	68
110.70	28°36.5'	118°18'	II-22	1941	1956	444	0-117	115	115
110.80	28°16.5'	118°57.5'	II-23	0006	0021	472	0-130	68	68
110.90	27°56.5'	119°36'	II-23	0441	0456	442	0-123	79	79
113.30	29°22.5'	115°17.5'	II-21	2114	2119	170	0-43	76	76
113.35	29°07'	115°37'	II-21	1821	1836	452	0-125	66	66
113.40	29°02'	115°58.5'	II-21	1556	1610	448	0-131	42	42
113.45	28°52'	116°18'	II-21	1336	1351	468	0-131	96	96
113.50	28°42'	116°37.5'	II-21	1101	1116	456	0-121	97	97
113.60	28°22'	117°17'	II-21	0626	0641	458	0-122	105	79
117.26	28°56'	114°41'	II-19	2308	2315	221	0-60	226	226
117.30	28°48'	114°56.5'	II-20	0107	0117	317	0-79	85	85
117.35	28°38'	115°15'	II-20	0341	0356	428	0-134	89	89
117.40	28°28'	115°35.5'	II-20	0846	0900	403	0-130	79	79
117.50	28°07'	116°14'	II-20	1336	1350	434	0-123	44	44

Plankton Volumes, Cruise 5802, February 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
117.60	27°45.5'	116°52'	II-20	1836	1851	425	0-125	143	143
117.70			Occupied. Sample lost						
118.39	28°18.5'	115°24'	II-20	0531	0546	393	0-137	109	109
119.33	28°19'	114°53'	II-19	1451	1503	300	0-93	93	93
120.25	28°23'	114°14.5'	II-19	1858	1904	185	0-56	168	168
120.30	28°13'	114°34'	II-19	1708	1716	274	0-76	80	80
120.35	28°03'	114°54'	II-19	1258	1306	246	0-64	81	81
120.40	27°57'	115°15'	II-18	2129	2133	151	0-20	86	86
120.45	27°44'	115°33'	II-18	1901	1916	432	0-131	153	153
120.50	27°37.5'	115°52'	II-18	1706	1721	486	0-114	97	97
120.60	27°18'	116°32'	II-18	1156	1211	485	0-115	52	52
120.70	26°57'	117°13'	II-18	0726	0741	420	0-134	29	29
120.80	26°35'	117°50'	II-18	0306	0321	477	0-114	63	63
120.90	26°13'	118°27.5'	II-17	2101	2115	447	0-118	38	38
123.37	27°24'	114°40'	II-16	2113	2121	239	0-56	117	117
123.42	27°14.5'	114°58'	II-16	2326	2341	399	0-137	78	78
123.50	26°55.5'	115°31.5'	II-17	0306	0321	443	0-130	113	113
123.60	26°36.5'	116°07'	II-17	0701	0715	485	0-112	60	60
127.34	26°55'	114°07'	II-16	1658	1705	223	0-62	135	135
127.40	26°44'	114°30'	II-16	1416	1431	404	0-129	89	89
127.45	26°34.5'	114°50'	II-16	1146	1201	485	0-132	47	47
127.50	26°25'	115°08'	II-16	0911	0925	416	0-131	60	60
127.60	26°06.5'	115°47'	II-16	0446	0500	444	0-126	65	65
130.30	26°28'	113°42.5'	II-15	1008	1016	255	0-63	90	90
130.35	26°15'	114°45'	II-15	1136	1151	463	0-122	52	52
130.40	26°14'	114°08.5'	II-15	1356	1411	490	0-123	51	51
130.45	26°05'	114°26.5'	II-15	1721	1736	450	0-123	62	62
130.50	25°53'	114°48'	II-15	2016	2031	424	0-137	71	71
130.60	25°33.5'	115°26'	II-16	0036	0051	418	0-141	33	33
133.25	26°05.3'	112°49.5'	II-15	0453	0600	231	0-61	125	125
133.30	25°55.2'	113°08'	II-15	0216	0230	458	0-131	185	185
133.35	25°45'	113°26.2'	II-14-15	2356	0011	404	0-145	84	84
133.40	25°34.5'	113°45.5'	II-14	2126	2140	418	0-145	84	84
133.50	25°13'	114°25.5'	II-14	1641	1656	507	0-125	24	24
137.23	25°34.2'	112°18.7'	II-13	2253	2300	210	0-75	100	100
137.30	25°20'	112°45.5'	II-14	0206	0221	496	0-126	141	91
137.35	25°10'	113°04.5'	II-14	0456	0511	481	0-132	48	48
137.40	25°00'	113°23.5'	II-14	0756	0811	439	0-127	46	46
137.50	24°40'	114°01.5'	II-14	1211	1226	504	0-119	50	50

Plankton Volumes, Cruise 5802, February 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
140.30	24°44'	112°26'	II-12	1406	1421	459	0-134	100	100
140.35	24°31'	112°41'	II-12	1146	1201	462	0-138	89	89
140.40	24°23'	113°00'	II-12	0901	0915	447	0-133	54	54
140.50	24°05'	113°40'	II-12	0431	0446	484	0-129	89	89
143.26	24°19'	111°48'	II-11	1548	1555	260	0-57	73	73
143.30	24°11'	112°03'	II-11	1736	1751	356	0-138	51	51
143.35	24°01'	112°22'	II-11	2011	2026	413	0-146	44	44
143.40	23°51'	112°40'	II-11	2226	2241	418	0-144	62	62
147.20	23°56'	111°03'	II-11	1046	1100	451	0-140	95	95
147.25	23°47'	111°23'	II-11	0816	0831	490	0-118	153	153
147.30	23°35.5'	111°41.5'	II-11	0516	0531	478	0-133	42	42
147.40	23°17'	112°22'	II-11	0031	0046	423	0-135	69	69
150.19	23°24'	110°38.5'	II-10	0826	0841	508	0-127	20	20
150.25	23°10'	111°03'	II-10	1246	1300	578	0-120	21	21
150.30	23°01'	111°19'	II-10	1445	1500	451	0-146	29	29
150.40	22°42'	111°57.5'	II-10	2011	2026	455	0-133	114	114

Plankton Volumes, Cruise 5803, March 1958

70.52	36°08.5'	121°49.8'	III-1	1321	1335	444	0-134	45	45
70.60	35°53'	122°23'	III-1	1856	1910	440	0-140	68	68
70.70	35°33'	123°06'	III-2	0141	0155	420	0-142	264	214
70.80	35°13'	123°48'	III-2	0806	0821	422	0-142	95	95
70.90	34°53'	124°30'	III-2	1401	1416	484	0-132	76	76
73.55	35°27.5'	121°37.5'	III-1	0556	0611	469	0-143	175	175
73.90	34°19'	124°06'	III-2	1911	1925	406	0-141	133	133
77.55	34°54.5'	121°13'	II-28	1056	1111	417	0-143	43	43
77.60	34°44'	121°34'	II-28	1501	1515	423	0-142	61	61
77.90	33°49'	123°42'	III-3	0036	0050	429	0-137	135	135
80.51	34°26.5'	120°32.5'	III-4	0843	0850	223	0-68	382	382
80.55	34°19'	120°48'	III-4	0541	0555	469	0-147	89	89
80.60	34°09'	121°09'	III-4	0126	0140	460	0-132	126	126
80.70	33°49'	121°51'	III-3	1941	1956	462	0-137	102	102
80.80	33°29'	122°32'	III-3	1341	1356	441	0-138	39	39
80.90	33°21.5'	123°21'	III-3	0626	0641	435	0-148	60	60
82.47	34°15'	119°58'	III-4	1236	1250	437	0-135	57	57
83.40	34°14'	119°22'	III-4	1639	1641	94	0-15	288	288
83.43	34°08'	119°34'	III-4	1841	1855	481	0-145	131	131

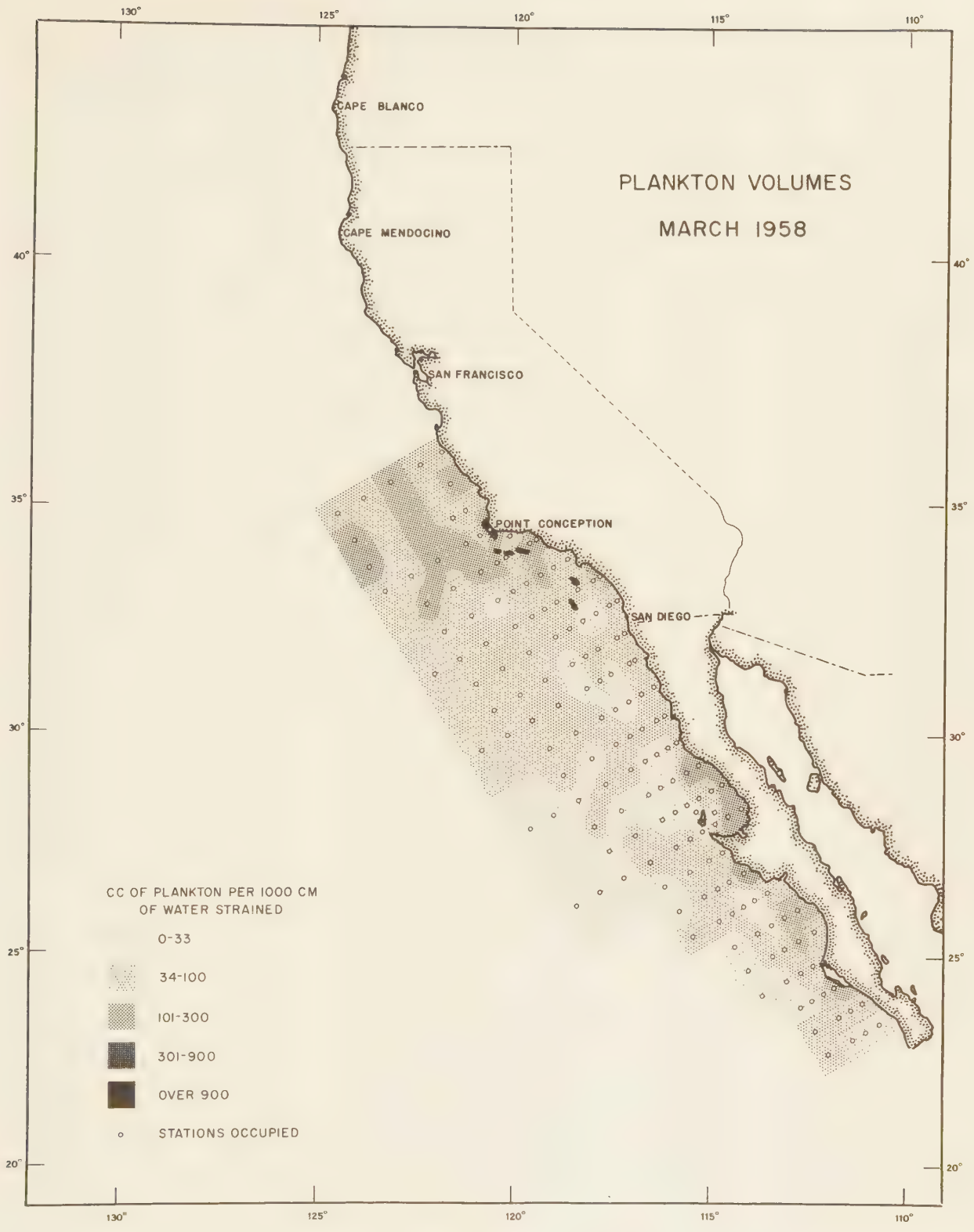

Figure 6.--Plankton volumes, March 1958.

Plankton Volumes, Cruise 5803, March 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
83.51	33°52'	120°08.5'	III-4	2342	2355	422	0-112	92	92
83.55	33°44'	120°24.5'	III-5	0231	0246	444	0-132	135	135
83.60	33°34'	120°45'	III-5	0541	0555	385	0-140	114	114
83.70	33°14.5'	121°26'	III-5	1121	1140	375	0-140	69	69
83.80	32°54.5'	122°07.5'	III-5	1906	1921	396	0-144	134	134
87.35	33°50'	118°37'	III-7	2152	2206	408	0-145	69	69
87.40	33°40'	118°58.5'	III-8	0042	0056	443	0-142	88	88
87.45	33°32'	119°19'	III-8	0351	0406	372	0-144	140	140
87.50	33°20'	119°39.5'	III-8	0648	0656	221	0-70	95	95
87.55	33°10'	120°00.5'	III-8	0956	1011	421	0-140	69	69
87.60	33°00'	120°21.5'	III-8	1306	1320	392	0-139	33	33
87.70	32°39.5'	121°02'	III-6	0806	0821	466	0-128	43	43
87.80	32°19.5'	121°43'	III-6	0140	0155	373	0-154	70	70
90.28	33°28.5'	117°46.7'	III-7	1516	1530	434	0-141	104	104
90.30	33°24.5'	117°55'	III-7	1411	1425	398	0-142	75	75
90.37	33°11'	118°23.5'	III-7	0921	0936	461	0-137	37	37
90.45	32°54.5'	118°56'	III-12	1131	1146	416	0-135	38	38
90.50	32°44.6'	119°16.5'	III-12	0816	0831	371	0-150	78	78
90.55	32°34.8'	119°36.8'	III-12	0521	0536	388	0-148	52	52
90.60	32°26.5'	119°58'	III-12	0141	0155	448	0-150	85	85
90.70	32°04.5'	120°39'	III-11	1856	1911	477	0-146	96	96
90.80	31°45'	121°19'	III-11	1216	1231	348	0-152	55	55
90.90	31°18'	121°42.5'	III-11	0341	0356	415	0-137	92	92
93.27	32°56'	117°19.2'	III-9	0741	0755	368	0-108	87	87
93.30	32°50'	117°31.5'	III-9	0921	0935	404	0-141	59	59
93.35	32°40'	117°52'	III-9	1236	1250	387	0-143	23	23
93.40	32°30'	118°12.5'	III-9	1541	1555	405	0-150	30	30
93.45	32°20'	118°32.5'	III-9	1826	1841	455	0-146	55	55
93.50	32°10'	118°53.5'	III-9	2126	2141	419	0-149	72	72
93.60	31°52'	119°26'	III-10	0411	0426	416	0-146	43	43
93.70	31°29'	120°14'	III-10	1141	1156	394	0-135	71	71
93.80	31°10'	120°54.5'	III-10	1801	1815	401	0-143	67	67
97.30	32°15.4'	117°08.8'	III-14	2114	2120	201	0-52	60	60
97.32	32°11.5'	117°17'	III-14	2226	2241	423	0-142	66	66
97.40	31°55.5'	117°50'	III-15	0226	0241	436	0-144	55	55
97.45	31°45'	118°10'	III-15	0541	0556	433	0-138	42	42
97.50	31°35.5'	118°30.5'	III-15	0851	0910	413	0-145	22	22
97.60	31°15.5'	119°10.5'	III-15	1426	1440	392	0-144	46	46
97.70	30°55'	119°50.5'	III-15	2046	2101	407	0-147	64	64

Plankton Volumes, Cruise 5803, March 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
97.80	30°35.5'	120°31'	III-16	0301	0315	398	0-140	65	65
100.30	31°40.5'	116°46.5'	III-17	2141	2156	416	0-143	48	48
100.32	31°35.7'	116°54.6'	III-17	1951	2005	407	0-144	49	49
100.40	31°18.8'	117°28.8'	III-17	1416	1430	425	0-141	31	31
100.45	31°10.5'	117°47'	III-17	1131	1145	381	0-142	71	71
100.50	31°01'	118°07'	III-17	0846	0905	408	0-145	24	24
100.60	30°37.5'	118°47.5'	III-17	0316	0330	403	0-140	69	69
100.70	30°19.2'	119°27'	III-16	2156	2210	396	0-146	58	58
100.80	30°01'	120°07'	III-16	1636	1651	416	0-143	67	67
100.90	29°40.5'	120°47'	III-16	1151	1206	386	0-138	47	47
103.30	31°05.2'	116°25'	III-18	0258	0306	212	0-66	94	94
103.35	30°55.5'	116°45'	III-18	0601	0615	409	0-141	44	44
103.40	30°45.5'	117°05.5'	III-18	0901	0915	393	0-147	18	18
103.45	30°36.6'	117°25'	III-18	1216	1231	378	0-137	21	21
103.50	30°25.5'	117°45.5'	III-18	1511	1526	423	0-137	54	54
103.60	30°06'	118°25.5'	III-18	2056	2110	400	0-141	70	70
103.70	29°45.2'	119°10'	III-19	0201	0215	399	0-140	58	58
107.32	30°25.8'	116°11'	III-20	0621	0635	433	0-134	39	39
107.35	30°20'	116°23'	III-20	0401	0415	377	0-144	74	74
107.40	30°10.5'	116°43.5'	III-20	0111	0126	416	0-139	48	48
107.45	30°00'	117°03'	III-19	2226	2241	430	0-139	37	37
107.50	29°50.5'	117°23.5'	III-19	1941	1956	398	0-144	45	45
107.60	29°31'	118°03'	III-19	1406	1421	397	0-144	30	30
107.70	29°11'	118°43'	III-19	0806	0821	405	0-145	44	44
110.33	29°51'	115°55'	III-19	1242	1252	343	0-104	47	47
110.35	29°49'	116°11'	III-19	1041	1056	370	0-158	22	22
110.40	29°39'	116°30'	III-19	0811	0826	383	0-147	29	29
110.45	29°29'	116°48'	III-19	0551	0606	436	0-145	14	14
110.50	29°20.5'	117°05'	III-19	0331	0346	447	0-141	54	54
110.60	29°02.5'	117°40.5'	III-18	2221	2236	440	0-142	41	41
110.70	28°41'	118°21'	III-18	1706	1721	429	0-133	12	12
110.80	28°20'	119°00'	III-18	1236	1251	458	0-142	11	11
110.90	28°00'	119°36'	III-18	0746	0801	456	0-140	13	13
113.30	29°22.5'	115°17.5'	III-17	0224	0228	161	0-34	205	205
113.35	29°12'	115°39'	III-17	0441	0456	440	0-138	111	111
113.40	29°02'	115°58.5'	III-17	0711	0726	453	0-133	20	20
113.45	28°52'	116°18'	III-17	0946	1001	429	0-141	33	33
113.50	28°42'	116°40'	III-17	1316	1331	433	0-137	14	14
113.60	28°24'	117°16'	III-17	1851	1905	457	0-142	33	33

Plankton Volumes, Cruise 5803, March 1958 (cont'd)

Position				Time (PST)		Vol. water strained	Depth of haul in	Vol. per 1000 C.M. strained	
			(1958)					Total	Sm. org.
Sta.	N. lat.	W. long.	Date	Start	End	C.M.	meters	cc.	cc.
113.70	28°05'	117°56'	III-17	2306	2321	428	0-142	37	37
117.26	28°56'	114°41'	III-16	2208	2215	234	0-57	162	162
117.30	28°48'	114°56.5'	III-16	2018	2027	291	0-79	55	55
117.35	28°38'	115°16'	III-16	1736	1750	461	0-134	35	35
117.40	28°28'	115°35.5'	III-16	1331	1345	505	0-135	18	18
117.45	28°18'	115°55.2'	III-16	1106	1121	482	0-138	19	19
117.50	28°08'	116°15'	III-16	0816	0830	445	0-139	22	22
117.60	27°47.5'	116°54'	III-16	0321	0336	481	0-139	60	60
117.70	27°27.5'	117°32.5'	III-15	2301	2316	458	0-136	28	28
118.39	28°18.5'	115°24'	III-16	1511	1525	478	0-136	31	31
119.33	28°19'	114°53'	III-14	0702	0712	304	0-76	16	16
120.25	28°23'	114°14.5'	III-14	1039	1043	147	0-23	164	164
120.30	28°13'	114°34'	III-14	1245	1252	231	0-66	112	112
120.35	28°03'	114°54'	III-14	1508	1515	254	0-48	43	43
120.40	27°56.5'	115°14'	III-14	1714	1717	94	0-20	21	21
120.45	27°45'	115°34'	III-14	1921	1935	421	0-143	93	93
120.50	27°34.3'	115°53.4'	III-14	2236	2251	462	0-138	72	72
120.60	27°19'	116°34'	III-15	0301	0316	478	0-137	73	73
120.70	26°59'	117°13.5'	III-15	0711	0726	438	0-136	27	27
120.80	26°39'	117°51'	III-15	1216	1231	471	0-132	11	11
120.90	26°25'	118°18'	III-15	1516	1531	474	0-131	13	13
123.37	27°24'	114°39.7'	III-13	0233	0240	219	0-60	82	82
123.42	27°13.5'	114°59.5'	III-12	2346	0001	458	0-135	81	81
123.50	26°53.5'	115°34'	III-12	1956	2010	444	0-142	86	86
123.60	26°34'	116°12'	III-12	1526	1541	498	0-135	22	22
127.34	26°55.3'	114°06'	III-11	2303	2311	250	0-69	156	156
127.40	26°43.5'	114°29.5'	III-12	0141	0155	382	0-134	58	58
127.45	26°33'	114°50'	III-12	0406	0421	463	0-138	54	54
127.50	26°20'	115°09'	III-12	0631	0646	453	0-142	53	53
127.60	26°00'	115°47'	III-12	1101	1116	460	0-135	30	30
130.30	26°26'	113°29'	III-11	1813	1820	187	0-56	54	54
130.35	26°16'	113°45'	III-11	1546	1601	440	0-144	25	25
130.40	26°04'	114°03'	III-11	1326	1341	470	0-138	15	15
130.45	25°52.8'	114°20.5'	III-11	1101	1116	409	0-140	71	71
130.50	25°41.3'	114°38.5'	III-11	0831	0846	433	0-115	60	60
130.60	25°27'	115°16'	III-11	0356	0410	423	0-143	43	43
133.25	25°55.5'	112°48.5'	III-10	1053	1102	292	0-78	151	151
133.30	25°49'	113°01'	III-10	1221	1235	501	0-126	104	104
133.35	25°39'	113°24'	III-10	1446	1500	392	0-144	20	20

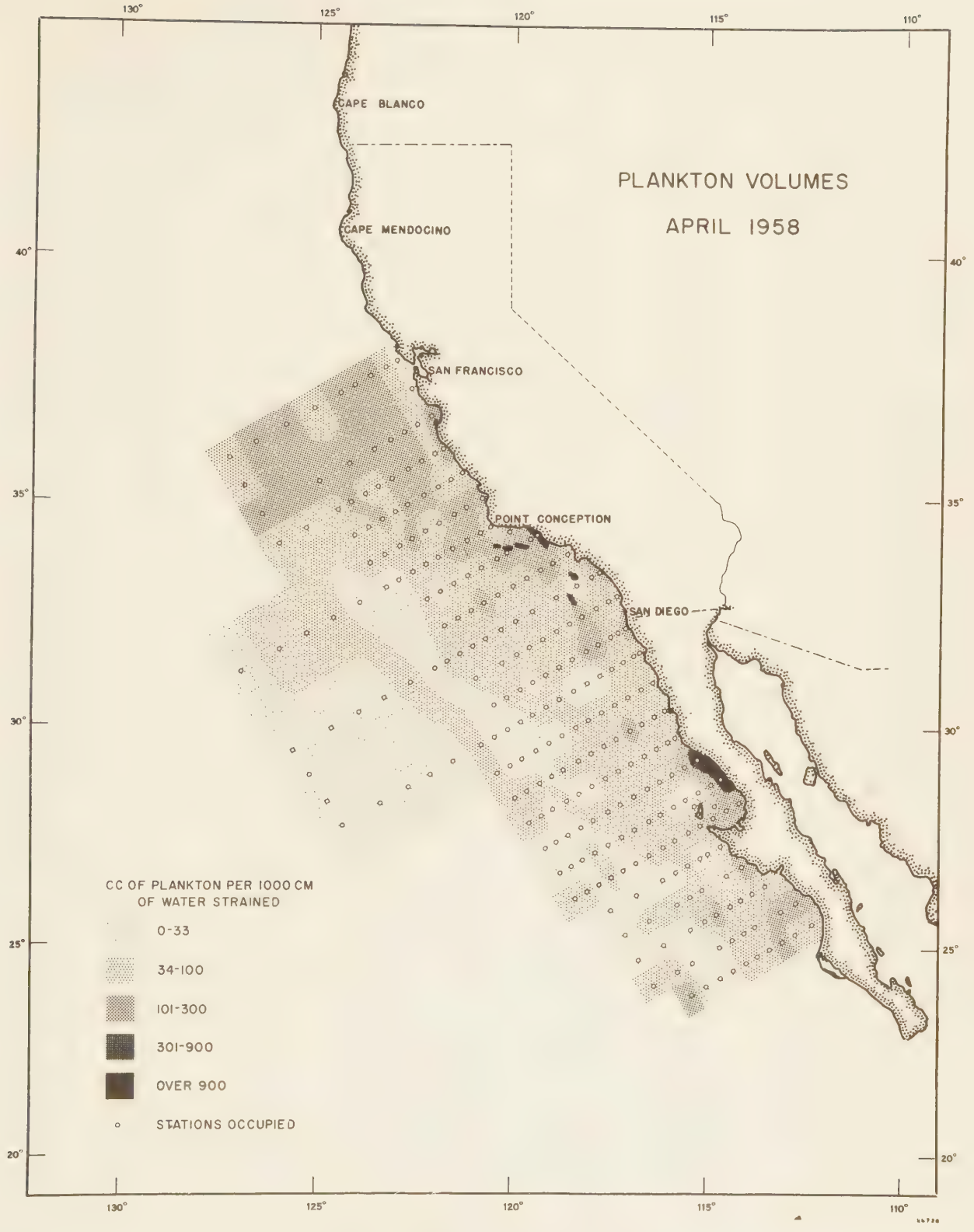

Figure 7.--Plankton volumes, April 1958.

Plankton Volumes, Cruise 5803, March 1958 (cont'd)

Position				Time (PST)		Vol. water strained	Depth of haul in	Vol. per 1000 C.M. strained	
			(1958)					Total	Sm. org.
Sta.	N. lat.	W. long.	Date	Start	End	C.M.	meters	cc.	cc.
133.40	25°31'	113°44'	III-10	1721	1736	425	0-139	42	42
133.50	25°14.5'	114°24'	III-10	2201	2216	432	0-145	28	28
137.23	25°26'	112°26.5'	III-10	0618	0626	239	0-69	75	75
137.30	25°14'	112°50.5'	III-10	0316	0330	463	0-139	136	136
137.35	25°04'	113°11'	III-10	0046	0100	449	0-143	49	49
137.40	24°55'	113°30.5'	III-9	2226	2040	415	0-144	43	43
137.50	24°40'	114°02'	III-9	1641	1656	433	0-136	12	12
140.30	24°43.5'	112°26'	III-9	0116	0127	253	0-96	36	36
140.35	24°36'	112°43'	III-9	0341	0356	471	0-141	42	42
140.40	24°25'	113°04'	III-9	0611	0626	459	0-142	15	15
140.50	24°04'	113°42'	III-9	1131	1146	428	0-143	23	23
143.26	24°19'	111°48'	III-8	2028	2036	207	0-79	265	265
143.30	24°11'	112°03'	III-8	1821	1836	294	0-133	68	68
143.35	24°00.2'	112°23'	III-8	1521	1535	463	0-134	17	17
143.40	23°51'	112°40.5'	III-8	1251	1305	453	0-134	29	29
147.20	23°56'	111°03.5'	III-7	2151	2205	380	0-138	50	50
147.25	23°46.5'	111°22.5'	III-8	0011	0026	453	0-142	71	71
147.30	23°36'	111°41.5'	III-8	0321	0336	455	0-141	66	66
147.40	23°17.2'	112°20'	III-8	0811	0825	413	0-147	69	69
150.19	23°23.7'	110°39'	III-7	1706	1721	490	0-138	33	33
150.25	23°04.5'	111°02'	III-7	1326	1340	495	0-133	16	16
150.30	22°54.5'	111°21'	III-7	1026	1040	447	0-138	13	13
150.40	22°35'	111°59'	III-7	0631	0645	490	0-124	65	65

Plankton Volumes, Cruise 5804, April 1958

47.50	40°14.4'	124°31.6'	III-31	0556	0610	462	0-138	286	286
47.55	40°04.4'	124°55'	III-31	0911	0926	527	0-127	252	252
60.52	37°53.5'	123°01.8'	IV-16	2058	2105	230	0-68	13	13
60.55	37°47.5'	123°15'	IV-16	2323	2333	308	0-107	78	78
60.60	37°37'	123°37'	IV-17	0311	0325	414	0-139	118	118
60.65	37°27'	123°59.5'	IV-17	0611	0626	343	0-146	222	222
60.70	37°17'	124°21.5'	IV-17	1051	1105	409	0-142	117	117
60.80	36°57'	125°04'	IV-17	1711	1725	429	0-132	89	89
60.90	36°37'	125°47'	IV-17	2316	2331	408	0-138	196	196
60.100	36°17'	126°27.2'	IV-18	0546	0601	407	0-136	110	110
60.110	35°55'	127°15'	IV-18	1236	1250	354	0-143	48	48
63.52	37°19'	122°36.2'	IV-16	1343	1350	232	0-67	30	30

Plankton Volumes, Cruise 5804, April 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
63.110	35°21.5'	126°46'	IV-18	1841	1856	405	0-137	59	59
67.50	36°49'	122°04.6'	IV-16	0657	0707	284	0-91	109	109
67.55	36°38.3'	122°24.5'	IV-16	0411	0426	403	0-139	77	77
67.60	36°28.5'	122°46.2'	IV-16	0006	0021	394	0-145	127	127
67.65	36°19'	123°09'	IV-15	1856	1910	395	0-144	405	149
67.70	36°08'	123°29.5'	IV-15	1446	1501	397	0-143	121	121
67.80	35°47.5'	124°12'	IV-15	0741	0755	417	0-138	106	106
67.90	35°28'	124°55'	IV-15	0016	0031	380	0-140	129	129
67.110	34°46.2'	126°18.8'	IV-19	0041	0056	359	0-145	106	106
70.52	36°06.3'	121°49.5'	IV-9	0001	0015	489	0-130	108	108
70.55	36°03'	122°02'	IV-13	1731	1746	482	0-135	110	79
70.60	35°53'	122°23'	IV-13	2056	2111	429	0-145	156	156
70.65	35°43'	122°45'	IV-14	0001	0016	425	0-140	118	118
70.70	35°32.5'	123°07.5'	IV-14	0346	0400	420	0-138	133	133
70.75	35°21'	123°31.3'	IV-14	0656	0711	431	0-137	95	95
70.80	35°12'	123°55.2'	IV-14	1041	1056	410	0-140	98	98
70.85	34°59'	124°18'	IV-14	1346	1401	417	0-138	101	101
70.90	34°53'	124°30'	IV-14	1706	1721	472	0-143	98	98
70.100	34°31.2'	125°19'	IV-19	1356	1410	349	0-144	69	69
70.110	34°13'	125°54'	IV-19	0701	0715	355	0-133	42	42
73.51	35°33.8'	121°20.5'	IV-9	0516	0531	482	0-132	91	91
73.55	35°27.5'	121°37.5'	IV-12	1246	1300	483	0-133	74	74
73.60	35°18'	121°58.4'	IV-12	0907	0921	401	0-139	100	100
73.65	35°10'	122°19'	IV-12	0511	0526	438	0-143	107	107
73.70	34°58.2'	122°38.8'	IV-12	0216	0230	441	0-139	109	109
73.75	34°48'	123°01.5'	IV-11	2216	2231	488	0-130	94	94
73.80	34°38.2'	123°21.7'	IV-11	1916	1930	493	0-107	116	116
73.85	34°28.5'	123°42.5'	IV-11	1556	1611	494	0-144	53	53
73.90	34°18.2'	124°04'	IV-11	1246	1300	416	0-143	91	91
77.50	35°01.4'	120°52.5'	IV-9	1157	1211	441	0-139	145	145
77.55	34°52.5'	121°13.5'	IV-9	1441	1455	406	0-136	116	116
77.60	34°42'	121°35.5'	IV-9	1816	1831	433	0-140	222	222
77.65	34°32'	121°55'	IV-9	2114	2130	649	0-111	94	94
77.70	34°22'	122°16'	IV-9-10	2356	0010	426	0-118	63	63
77.75	34°14'	122°34.5'	IV-11	0211	0226	454	0-136	137	137
77.80	34°03'	122°57.5'	IV-10	2341	2356	491	0-137	77	77
77.85	33°53.5'	123°17.5'	IV-10	2106	2120	529	0-116	49	49
77.90	33°31.5'	123°30'	IV-11	0322	0336	409	0-132	39	39
80.51	34°26.5'	120°32.5'	IV-9	1328	1336	280	0-75	14	14

Plankton Volumes, Cruise 5804, April 1958 (cont'd)

Position				Time (PST)		Vol. water strained	Depth of haul in	Vol. per 1000 C.M. strained	
			(1958)					Total	Sm. org.
Sta.	N. lat.	W. long.	Date	Start	End	C.M.	meters	cc.	cc.
80.55	34°19'	120°48'	IV-9	1841	1855	446	0-138	152	152
80.60	34°09'	121°09'	IV-9	2231	2246	438	0-136	146	146
80.65	33°59'	121°30'	IV-10	0136	0151	422	0-137	116	116
80.70	33°47'	121°54'	IV-10	0606	0620	458	0-138	92	92
80.75	33°40'	122°15'	IV-10	0836	0851	456	0-138	96	96
80.80	33°27'	122°35'	IV-10	1245	1301	457	0-137	42	42
80.85	33°18'	122°52'	IV-10	1526	1540	457	0-134	31	31
80.90	33°06'	123°14'	IV-10	1836	1851	489	0-125	29	29
80.100	32°49'	123°54'	IV-6	1601	1617	504	0-107	30	30
80.110	32°29'	124°34.5'	IV-6	1016	1030	351	0-135	46	46
80.120	32°05'	125°19'	IV-6	0206	0221	488	0-136	45	45
80.130	31°49'	125°56'	IV-5	2111	2126	490	0-136	53	53
80.145	31°18.5'	126°58'	IV-5	1235	1251	504	0-136	20	20
82.47	34°14.5'	119°59'	IV-1	1831	1845	471	0-140	164	164
83.40	34°14'	119°21.7'	IV-1	1159	1202	90	0-12	335	335
83.43	34°09'	119°33.5'	IV-1	1431	1445	478	0-133	159	159
83.51	33°52'	120°07.5'	IV-1	2326	2339	402	0-125	200	200
83.55	33°44.5'	120°23'	IV-2	0211	0226	471	0-127	121	121
83.60	33°35'	120°43'	IV-2	0716	0731	442	0-144	72	72
83.65	33°28'	121°07.5'	IV-4	0851	0906	446	0-147	54	54
83.70	33°16.5'	121°27'	IV-4	1146	1201	441	0-145	45	45
83.75	33°08'	121°43'	IV-4	1516	1531	413	0-144	27	27
83.80	32°59'	121°58'	IV-4	1836	1851	444	0-146	52	52
87.35	33°50'	118°37.5'	IV-6	0626	0641	427	0-144	84	84
87.40	33°40'	118°58.5'	IV-6	0256	0310	434	0-134	106	106
87.45	33°30'	119°19.1'	IV-5	2311	2326	439	0-137	146	146
87.50	33°20.1'	119°39.5'	IV-5	1958	2006	232	0-65	60	60
87.55	33°11'	120°02'	IV-5	1656	1711	458	0-133	46	46
87.60	33°02'	120°22.5'	IV-5	1341	1356	459	0-134	65	65
87.65	32°50'	120°42'	IV-5	1036	1051	428	0-136	103	103
87.70	32°39.5'	121°03'	IV-5	0726	0741	399	0-149	70	70
87.75	32°30'	121°23'	IV-5	0336	0351	449	0-130	85	85
87.80	32°20'	121°44'	IV-5	0016	0031	489	0-134	76	76
90.28	33°28.5'	117°47'	IV-7	1641	1656	434	0-139	131	131
90.30	33°24.5'	117°55'	IV-7	1906	1921	497	0-154	72	72
90.37	33°10.5'	118°23.5'	IV-8	1101	1115	432	0-140	25	25
90.45	32°55'	118°56.5'	IV-8	1556	1610	473	0-125	85	85
90.55	32°32'	119°36.5'	IV-9	0650	0706	363	0-140	85	85
90.60	32°26'	119°57'	IV-9	1111	1126	393	0-148	66	66

Plankton Volumes, Cruise 5804, April 1958 (cont'd)

Position				Time (PST)		Vol. water strained	Depth of haul in	Vol. per 1000 C.M. strained	
			(1958)					Total	Sm. org.
Sta.	N. lat.	W. long.	Date	Start	End	C.M.	meters	cc.	cc.
90.65	32°15.5'	120°18'	IV-9	1511	1526	514	0-100	51	51
90.70	32°02'	120°45'	IV-9	1940	1956	445	0-148	99	99
90.75	31°55'	120°58'	IV-9-10	2346	0001	524	0-122	71	71
90.80	31°45'	121°16'	IV-10	0346	0401	473	0-131	55	55
90.85	31°35'	121°39.5'	IV-10	0726	0741	412	0-159	61	61
90.90	31°27'	121°57.5'	IV-10	1056	1111	452	0-143	24	24
90.100	31°06'	122°33'	IV-10	1941	1956	422	0-148	59	59
90.110	30°45'	123°08.5'	IV-11	0220	0235	470	0-140	21	21
90.120	30°26.5'	123°58'	IV-11	1111	1126	457	0-139	15	15
90.130	30°06'	124°38'	IV-11	1956	2011	457	0-144	33	33
90.145	29°36'	125°38'	IV-12	0536	0551	468	0-128	13	13
93.27	32°56'	117°20'	IV-18	1631	1646	490	0-142	45	45
93.30	32°50'	117°31.5'	IV-18	1911	1926	465	0-122	43	43
93.35	32°40'	117°52'	IV-18	2241	2255	445	0-136	38	38
93.40	32°30'	118°12'	IV-19	0211	0226	409	0-137	117	117
93.45	32°20'	118°33'	IV-19	0536	0551	406	0-142	64	64
93.50	32°10'	118°53'	IV-19	0921	0936	428	0-137	42	42
93.55	32°00'	119°13'	IV-19	1240	1255	458	0-128	50	50
93.60	31°50'	119°33'	IV-19	1641	1656	469	0-148	41	41
93.65	31°41.5'	119°55'	IV-19	2156	2211	470	0-139	64	64
93.70	31°30'	120°29'	IV-20	0816	0831	445	0-139	36	36
93.80	31°11'	120°53'	IV-20	1406	1420	439	0-137	36	36
93.145	29°01'	125°19'	IV-12	1051	1106	457	0-138	24	24
97.30	32°15.5'	117°08.5'	IV-22	0623	0630	178	0-56	101	101
97.32	32°12.5'	117°17'	IV-22	0441	0456	441	0-135	93	93
97.35	32°04'	117°28.5'	IV-22	0146	0201	458	0-133	92	92
97.40	31°55.5'	117°50'	IV-21	2251	2306	449	0-135	107	107
97.45	31°43'	118°09.5'	IV-21	1906	1921	454	0-135	139	139
97.50	31°36'	118°31'	IV-21	1606	1620	472	0-129	72	72
97.55	31°26'	118°50'	IV-21	1226	1241	458	0-137	55	55
97.60	31°19'	119°05.5'	IV-21	1016	1031	458	0-128	57	57
97.65	31°06'	119°31'	IV-21	0636	0651	436	0-139	27	27
97.70	30°56'	119°51'	IV-21	0311	0326	400	0-135	90	90
97.75	30°46'	120°11'	IV-20	2321	2336	432	0-140	79	79
97.80	30°36'	120°31'	IV-20	2016	2031	449	0-144	33	33
97.145	28°26.5'	124°47'	IV-12	1656	1710	467	0-141	4	4
100.29	31°42'	116°43.5'	IV-16	0016	0030	(432)	0-142	(61)	(61)
100.30	31°41'	116°46.5'	IV-15	2321	2336	449	0-135	60	60
100.35	31°30'	117°00.5'	IV-15	2016	2031	426	0-134	68	68

Plankton Volumes, Cruise 5804, April 1958 (cont'd)

Position				Time (PST)		Vol. water strained	Depth of haul in meters	Vol. per 1000 C.M. strained	
			(1958)					Total	Sm. org.
Sta.	N. lat.	W. long.	Date	Start	End	C.M.		cc.	cc.
100.40	31°21'	117°24'	IV-15	1541	1556	431	0-137	60	60
100.45	31°12'	117°48'	IV-15	1226	1240	463	0-139	26	26
100.50	31°01'	118°07.5'	IV-15	0911	0926	472	0-128	21	21
100.55	30°57'	118°26.5'	IV-15	0606	0620	452	0-140	13	13
100.60	30°45.5'	118°46'	IV-15	0301	0316	446	0-133	34	34
100.65	30°33.5'	119°04.5'	IV-14	2326	2340	438	0-140	91	91
100.70	30°22.5'	119°20.5'	IV-14	2051	2106	453	0-136	57	57
100.75	30°10.5'	119°47'	IV-14	1731	1746	451	0-137	18	18
100.80	30°01'	120°07'	IV-14	1421	1436	450	0-137	13	13
100.85	29°51'	120°26.5'	IV-14	1041	1056	451	0-139	33	33
100.90	29°40'	120°52'	IV-14	0626	0641	455	0-136	70	70
100.100	29°21'	121°26'	IV-13	2341	2356	500	0-121	20	20
100.110	29°04'	122°02'	IV-13	1826	1840	469	0-136	4	4
100.120	28°50'	122°41'	IV-13	1336	1351	476	0-134	8	8
100.130	28°27'	123°21'	IV-13	0741	0756	495	0-131	4	4
100.145	27°52'	124°22'	IV-12	2246	2301	449	0-131	22	22
103.30	31°05.2'	116°25'	IV-23	0453	0500	244	0-69	82	82
103.35	30°55.5'	116°45'	IV-23	0827	0841	437	0-141	73	73
103.40	30°45'	117°05.5'	IV-23	1201	1215	423	0-141	35	35
103.45	30°35'	117°25.8'	IV-23	1516	1530	461	0-139	37	37
103.50	30°22'	117°45'	IV-23	1916	1930	463	0-140	60	60
103.55	30°16.5'	118°04'	IV-23	2211	2225	413	0-139	58	58
103.60	30°06'	118°25.5'	IV-24	0211	0226	412	0-141	56	56
103.65	29°57'	118°43.5'	IV-24	0511	0525	435	0-138	25	25
103.70	29°48.5'	119°00.8'	IV-24	0806	0821	417	0-142	14	14
103.75	29°36'	119°25'	IV-24	1202	1216	434	0-138	14	14
103.80	29°26.5'	119°45.5'	IV-24	1516	1530	412	0-141	19	19
103.85	29°17'	120°05'	IV-24	1806	1820	416	0-142	14	14
103.90	29°06'	120°25'	IV-24	2111	2125	435	0-137	37	37
107.32	30°25.8'	116°11'	IV-26	2106	2121	313	0-142	48	48
107.35	30°20'	116°23'	IV-26	1821	1836	311	0-144	71	71
107.40	30°10.7'	116°43'	IV-26	1432	1445	300	0-142	93	93
107.45	29°57.8'	117°03.4'	IV-26	1041	1056	318	0-141	126	126
107.50	29°50.5'	117°23.5'	IV-26	0711	0726	373	0-145	56	56
107.55	29°40.5'	117°42'	IV-26	0311	0325	390	0-138	77	77
107.60	29°31'	118°03'	IV-26	0010	0025	399	0-142	75	75
107.65	29°21.5'	118°21'	IV-25	2016	2030	401	0-139	45	45
107.70	29°11'	118°43'	IV-25	1711	1726	399	0-140	40	40
107.75	29°02'	119°00'	IV-25	1306	1320	411	0-133	15	15

Plankton Volumes, Cruise 5804, April 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
107.80	28°54.5'	119°19'	IV-25	1016	1030	412	0-142	34	34
107.85	28°42'	119°40.5'	IV-25	0601	0616	373	0-142	43	43
107.90	28°32.5'	120°01.5'	IV-25	0301	0316	399	0-145	48	48
110.33	29°50.5'	115°52.2'	IV-27	1143	1150	326	0-67	37	37
110.35	29°45'	115°58'	IV-27	1016	1031	376	0-131	50	50
110.40	29°35'	116°19'	IV-27	0716	0730	422	0-144	52	52
110.45	29°25.5'	116°39'	IV-27	0406	0421	402	0-143	57	57
110.50	29°16'	116°59'	IV-27	0126	0141	415	0-144	70	70
110.55	29°06.5'	117°19'	IV-26	2221	2236	425	0-142	92	92
110.60	28°58'	117°37'	IV-26	1941	1956	413	0-145	44	44
110.65	28°46.5'	117°57'	IV-26	1626	1640	443	0-140	20	20
110.70	28°41.8'	118°25'	IV-26	0756	0811	454	0-140	20	20
110.75	28°29.5'	118°42.5'	IV-26	0456	0510	406	0-147	37	37
110.80	28°17'	118°59.3'	IV-26	0226	0241	413	0-146	29	29
110.85	28°03.8'	119°16'	IV-25	2256	2311	416	0-144	34	34
110.90	27°53.2'	119°33'	IV-25	2011	2026	458	0-145	39	39
113.30	29°20'	115°21'	IV-24	0248	0255	246	0-66	330	330
113.35	29°12.2'	115°36'	IV-24	0526	0540	421	0-146	107	107
113.40	29°00.5'	115°56.5'	IV-24	0841	0855	308	0-135	68	68
113.45	28°48'	116°18.5'	IV-24	1151	1206	459	0-135	61	61
113.50	28°41.8'	116°36'	IV-24	1441	1456	444	0-141	65	65
113.55	28°32'	116°57'	IV-24	1736	1751	386	0-145	80	80
113.60	28°22'	117°16.5'	IV-24	2216	2231	471	0-137	79	79
113.65	28°08.5'	117°34'	IV-25	0111	0126	417	0-142	72	72
113.70	27°57.2'	117°56.5'	IV-25	0411	0426	400	0-151	45	45
113.75	28°47'	118°18'	IV-25	0641	0655	406	0-150	17	17
113.80	27°40'	118°32'	IV-25	0911	0926	435	0-141	18	18
113.85	27°31'	118°52.2'	IV-25	1146	1200	417	0-144	10	10
113.90	27°23'	119°12'	IV-25	1426	1440	440	0-137	9	9
117.26	28°56'	114°41'	IV-23	2118	2125	220	0-49	664	664
117.30	28°48'	114°56'	IV-23	1813	1821	270	0-80	244	244
117.35	28°38'	115°16'	IV-23	1526	1540	470	0-143	26	26
117.40	28°28'	115°35.5'	IV-23	1231	1245	479	0-129	6	6
117.45	28°12.8'	116°02.5'	IV-23	0846	0901	443	0-137	20	20
117.50	28°02.5'	116°21.8'	IV-23	0541	0556	409	0-141	42	42
177.55	27°51'	116°40.5'	IV-23	0241	0255	432	0-141	42	42
117.60	27°41'	117°00'	IV-23	0016	0030	414	0-144	48	48
117.65	27°31'	117°19'	IV-22	2051	2106	398	0-142	68	68
117.70	27°20'	117°39.5'	IV-22	1811	1825	417	0-142	26	26

Plankton Volumes, Cruise 5804, April 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
117.75	27°11.5'	117°58.5'	IV-22	1446	1501	460	0-135	50	50
117.80	27°02.7'	118°14.5'	IV-22	1116	1131	477	0-132	25	25
117.85	26°49.8'	118°35'	IV-22	0806	0821	471	0-126	13	13
117.90	26°39.4'	118°54.5'	IV-22	0426	0440	(411)	0-138	(15)	(15)
118.39	28°18.5'	115°24'	IV-20	1031	1045	428	0-133	37	37
119.33	28°19'	114°53'	IV-11	1058	1106	203	0-85	99	99
120.25	28°23'	114°14.5'	IV-11	0714	0719	173	0-37	121	121
120.30	28°12.8'	114°34.8'	IV-11	0443	0450	221	0-60	149	149
120.35	28°02'	114°59.5'	IV-11	0158	0205	198	0-58	126	126
120.40	27°56.5'	115°14'	IV-10-11	2359	0002	111	0-24	36	36
120.45	27°43'	115°33'	IV-20	1601	1615	373	0-147	40	40
120.50	27°32'	115°50.5'	IV-20	1926	1941	377	0-144	64	64
120.55	27°21'	116°10'	IV-20	2226	2241	391	0-140	56	56
120.60	27°09.5'	116°29'	IV-21	0336	0351	436	0-130	53	53
120.65	26°58'	116°47.5'	IV-21	0731	0746	413	0-133	29	29
120.70	26°47'	117°08.5'	IV-21	1111	1126	419	0-141	31	31
120.75	26°34.8'	117°30.5'	IV-21	1326	1340	426	0-137	40	40
120.80	26°28.8'	117°47'	IV-21	1611	1625	377	0-149	16	16
120.85	26°21'	118°07.2'	IV-21	1906	1920	389	0-142	62	62
120.90	26°13.2'	118°27'	IV-21	2246	2301	424	0-134	49	49
123.37	27°24.6'	114°41.8'	IV-10	1828	1834	178	0-49	73	73
123.42	27°18.2'	114°57'	IV-10	1636	1641	451	0-129	29	29
123.45	27°12'	115°08'	IV-10	1426	1441	436	0-134	32	32
123.50	27°05.5'	115°16.2'	IV-10	1241	1255	405	0-142	44	44
123.55	26°54.2'	115°36.5'	IV-10	0941	0956	363	0-148	33	33
123.60	26°45'	116°04.5'	IV-10	0716	0730	414	0-137	27	27
123.70	26°25.5'	116°43'	IV-10	0206	0221	420	0-135	29	29
123.80	26°06'	117°21'	IV-9	2026	2040	359	0-148	22	22
127.34	26°56.2'	114°08'	IV-8	1043	1050	215	0-71	177	177
127.40	26°44'	114°27.2'	IV-8	1356	1410	459	0-128	28	28
127.45	Occupied. Sample lost								
127.50	26°25'	115°03.2'	IV-8	2146	2200	362	0-156	100	100
127.55	26°13.8'	115°23'	IV-9	0026	0040	386	0-147	41	41
127.60	26°05.5'	115°38.5'	IV-9	0346	0400	421	0-136	62	62
127.70	25°44.5'	116°16.4'	IV-9	0856	0910	392	0-141	69	69
127.80	25°25'	116°51'	IV-9	1401	1415	413	0-144	17	17
130.30	26°31'	113°35.5'	IV-7	1029	1034	122	0-30	98	98
130.35	26°22.5'	113°48.5'	IV-7	0826	0841	396	0-134	40	40
130.40	26°12.2'	114°07'	IV-7	0526	0540	395	0-139	53	53

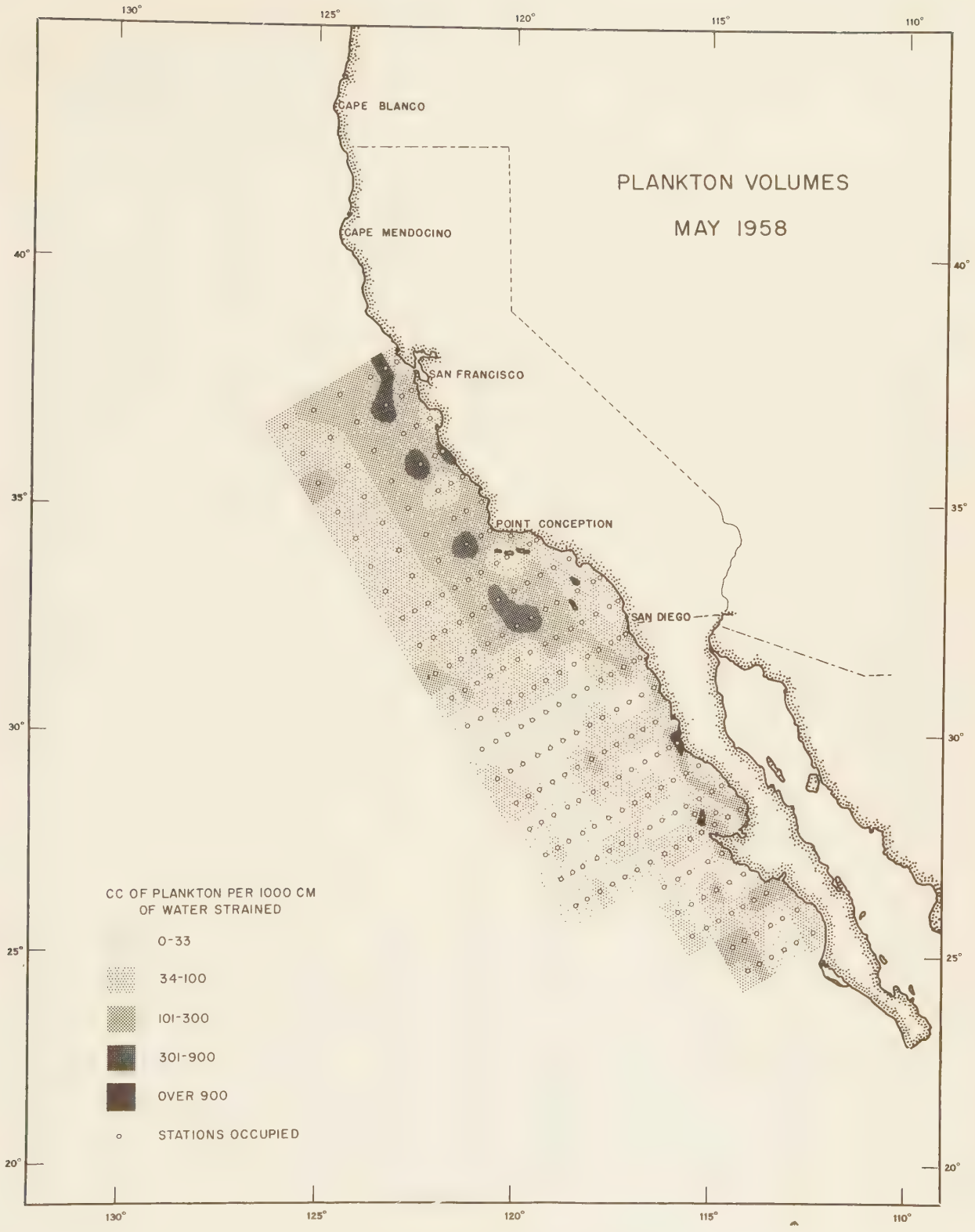

Figure 8.--Plankton volumes, May 1958.

Plankton Volumes, Cruise 5804, April 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
130.45	26°07'	114°31.5'	IV-7	0156	0210	395	0-149	48	48
130.50	25°57.5'	114°49.2'	IV-6	2336	2350	417	0-139	105	105
130.55	25°47.8'	115°13.5'	IV-6	2016	2030	412	0-141	49	49
130.60	25°38'	115°28'	IV-6	1746	1800	412	0-144	24	24
130.70	25°11.8'	116°19'	IV-6	1156	1210	446	0-135	13	13
130.80	24°51'	116°56.5'	IV-6	0646	0701	420	0-139	21	21
133.25	26°02.5'	112°54.5'	IV-4	1828	1837	255	0-88	180	180
133.30	25°54'	113°09.5'	IV-4	2041	2056	412	0-152	131	131
133.40	25°34'	113°50'	IV-5	2056	0310	383	0-146	73	73
133.45	25°21'	114°14'	IV-5	0521	0536	375	0-152	37	37
133.50	25°12'	114°35'	IV-5	0846	0900	399	0-139	38	38
133.55	25°03'	114°53.5'	IV-5	1121	1136	405	0-142	15	15
133.65	24°49'	115°20'	IV-5	1556	1610	475	0-119	13	13
133.70	24°38.5'	115°41'	IV-5	2011	2026	417	0-144	82	82
133.80	24°14.8'	116°25'	IV-5	0116	0131	421	0-137	38	38
137.23	25°34.2'	112°18.7'	IV-4	1103	1110	190	0-67	58	58
137.30	25°14'	112°44.5'	IV-4	0716	0730	373	0-149	43	43
137.35	25°04.5'	113°05'	IV-4	0401	0416	408	0-143	142	142
137.40	24°55'	113°24'	IV-4	0146	0200	406	0-141	57	57
137.45	24°46'	113°44'	IV-3	2241	2256	376	0-151	69	69
137.50	24°38'	114°00'	IV-3	1916	1930	418	0-135	65	65
137.55	24°28'	114°18.6'	IV-3	1556	1611	426	0-138	14	14
137.60	24°19.5'	114°37.5'	IV-3	1341	1355	443	0-136	14	14
137.70	23°59.5'	115°17.5'	IV-3	0811	0825	405	0-133	7	7
137.80	23°39.5'	115°55'	IV-3	0136	0151	437	0-127	103	103

Plankton Volumes, Cruise 5805, May 1958

60.52	37°53'	123°01'	V-16	1253	1300	266	0-60	68	68
60.55	37°46.5'	123°15'	V-16	1432	1443	357	0-103	599	599
60.60	37°36.5'	123°35'	V-16	1646	1701	432	0-141	204	204
60.70	37°17.5'	124°16'	V-16	2101	2116	503	0-129	105	105
60.80	36°57.5'	124°55.8'	V-17	0121	0136	494	0-132	105	105
60.90	36°38.5'	125°37'	V-17	0626	0640	461	0-134	63	63
63.52	37°20'	122°39.4'	V-15	0345	0352	223	0-72	116	116
63.55	37°12.5'	122°50'	V-15	0125	0140	484	0-130	110	110
63.60	37°01'	123°10.5'	V-14	2256	2311	467	0-139	416	416
63.70	36°40'	123°55'	V-14	1646	1700	450	0-142	200	200

Plankton Volumes, Cruise 5805, May 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
63.80	36°19.5'	124°38.5'	V-14	1046	1100	503	0-134	46	46
63.90	36°06.5'	125°12.8'	V-17	1041	1056	468	0-139	60	60
67.50	36°47.5'	122°04'	V-13	1400	1414	471	0-142	100	100
67.55	36°35.5'	122°26.5'	V-13	1635	1649	438	0-151	119	119
67.60	36°23.2'	122°48.5'	V-13	1856	1910	463	0-143	143	143
67.70	36°04'	123°30'	V-13	2331	2345	484	0-133	246	246
67.80	35°43'	124°14.8'	V-14	0500	0514	460	0-139	67	67
67.90	35°34'	124°50'	V-17	1511	1525	517	0-136	137	137
70.52	36°09'	121°50'	V-13	0901	0915	520	0-133	343	343
70.55	36°00'	122°00'	V-13	0701	0715	465	0-139	168	168
70.60	35°50.5'	122°21.8'	V-13	0341	0356	289	0-151	381	381
70.70	35°31'	123°05'	V-12	2311	2326	419	0-155	110	110
70.80	35°12.5'	123°47'	V-12	1800	1815	507	0-142	97	97
70.90	34°53.2'	124°27.5'	V-12	1341	1356	516	0-134	89	89
73.51	35°36'	121°20'	V-11	1331	1345	495	0-131	153	153
73.55	35°27.5'	121°37.5'	V-11	1546	1600	446	0-140	99	99
73.60	35°17.2'	121°58.5'	V-11	1816	1831	467	0-137	89	89
73.70	34°56.5'	122°40'	V-11	2301	2316	461	0-140	208	208
73.80	34°35'	123°24.5'	V-12	0326	0341	485	0-140	60	60
73.90	34°13.8'	124°09.5'	V-12	0801	0816	497	0-139	40	40
77.50	35°04.8'	120°52'	V-11	0516	0530	437	0-130	289	289
77.55	34°53.8'	121°11'	V-11	0230	0244	465	0-126	211	211
77.60	34°43'	122°33'	V-10	2345	2359	511	0-125	176	176
77.70	34°23.2'	122°15.8'	V-10	1836	1850	464	0-141	142	142
77.80	34°04.5'	122°56'	V-10	1351	1405	496	0-132	42	42
77.90	33°44.5'	123°38.5'	V-10	0911	0926	485	0-138	70	70
80.51	34°26.4'	120°31.5'	V-9	0400	0407	185	0-49	249	249
80.55	34°19.2'	120°48.5'	V-9	0700	0714	450	0-138	142	142
80.60	34°09.8'	121°09.5'	V-9	1036	1051	540	0-115	446	446
80.70	33°48.2'	121°50.2'	V-9	1651	1706	455	0-140	232	232
80.80	33°28'	122°35.6'	V-9	2130	2145	490	0-135	82	82
80.90	33°09.5'	123°19.5'	V-10	0400	0415	473	0-143	87	87
82.47	34°15'	119°58'	V-9	0041	0055	463	0-131	169	169
83.40	34°13.9'	119°21.4'	V-8	1630	1633	88	0-10	68	68
83.43	34°07.8'	119°34'	V-8	2146	2201	(608)	0-99	(76)	(76)
83.51	33°51.5'	120°08'	V-8	1101	1115	509	0-130	33	33
83.55	33°44'	120°25.5'	V-8	0836	0851	512	0-124	80	80
83.60	33°31'	120°46'	V-8	0556	0610	458	0-142	157	157
83.65	33°22.5'	121°04.8'	V-8	0251	0306	513	0-133	183	183

Plankton Volumes, Cruise 5805, May 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
83.70	33°13'	121°25'	V-8	0015	0029	433	0-132	176	176
83.75	33°03.5'	122°45.3'	V-7	2136	2150	523	0-133	57	57
83.80	32°53.6'	122°06'	V-7	1855	1911	470	0-150	60	60
83.85	32°43.8'	122°27.5'	V-7	1601	1615	449	0-144	58	58
83.90	32°35'	122°45'	V-7	1351	1405	479	0-136	42	42
87.35	33°50'	118°37.5'	V-6	0041	0055	510	0-132	31	31
87.40	33°39.2'	118°58'	V-6	0336	0350	511	0-129	98	98
87.45	33°30'	119°19'	V-6	0630	0645	479	0-137	201	201
87.50	33°20'	119°40'	V-6	1018	1025	225	0-60	258	258
87.55	33°10'	120°00.5'	V-6	1241	1255	471	0-137	187	187
87.60	33°00'	120°21.5'	V-6	1610	1625	417	0-145	532	532
87.65	32°50'	120°40'	V-6	1845	1902	533	0-138	120	120
87.70	32°39'	121°02'	V-6	2136	2152	514	0-119	109	109
87.75	32°29'	121°22'	V-7	0002	0016	479	0-137	58	58
87.80	32°18.5'	121°42.5'	V-7	0231	0246	485	0-135	72	72
87.85	32°10'	122°00.8'	V-7	0511	0526	486	0-135	70	70
87.90	32°00'	122°20'	V-7	0746	0800	469	0-136	55	55
90.28	33°28.5'	117°47'	V-3	1956	2010	494	0-142	47	47
90.30	33°24.5'	117°55'	V-3	2156	2210	544	0-144	62	62
90.37	33°11'	118°23'	V-4	0156	0211	473	0-147	93	93
90.45	32°55'	118°56'	V-4	0756	0811	436	0-139	126	126
90.50	32°45'	119°16.5'	V-4	1100	1124	466	0-128	116	116
90.55	32°35'	119°37'	V-4	1446	1500	392	0-141	480	480
90.60	32°23'	120°00.5'	V-4	1801	1816	449	0-137	312	312
90.65	32°15'	120°17'	V-4	2101	2116	446	0-136	242	242
90.70	32°04'	120°38.5'	V-5	0026	0041	475	0-126	198	198
90.75	31°52.5'	120°58.5'	V-5	0346	0401	414	0-142	48	48
90.80	31°42'	121°19'	V-5	0711	0726	458	0-140	39	39
90.85	31°32'	121°39'	V-5	1031	1036	452	0-146	84	84
90.90	31°22'	121°58'	V-5	1331	1346	502	0-115	104	104
93.27	32°56'	117°19'	V-7	1131	1146	508	0-122	91	91
93.30	32°50'	117°31.5'	V-7	0946	1001	479	0-136	21	21
93.35	32°40'	117°52'	V-7	0626	0641	459	0-136	52	52
93.40	32°30'	118°12.5'	V-7	0406	0421	443	0-139	45	45
93.45	32°20'	118°33'	V-7	0051	0106	488	0-122	152	152
93.50	32°10'	118°53'	V-6	2136	2151	485	0-127	132	132
93.55	32°00'	119°15'	V-6	1826	1841	478	0-129	222	222
93.60	31°50'	119°34'	V-6	1511	1526	495	0-139	12	12
93.65	31°41'	119°52'	V-6	1156	1211	474	0-128	57	57

Plankton Volumes, Cruise 5805, May 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
93.70	31°30'	120°15'	V-6	0856	0911	466	0-135	41	41
93.75	31°18.5'	120°38'	V-6	0521	0536	413	0-149	34	34
93.80	31°10.5'	120°55'	V-6	0136	0150	466	0-134	84	84
93.85	31°01'	121°15'	V-5	2156	2211	462	0-142	108	108
93.90	30°50'	121°35'	V-5	1831	1846	432	0-144	42	42
97.30	32°15.5'	117°08.5'	V-7	1918	1925	218	0-57	119	119
97.32	32°11.5'	117°16.5'	V-7	2041	2056	471	0-135	81	81
97.35	32°05'	117°28.5'	V-7	2256	2311	462	0-136	100	100
97.40	31°55'	117°50'	V-8	0211	0226	473	0-129	104	104
97.45	31°45.5'	118°10'	V-8	0501	0516	473	0-133	59	59
97.50	31°35'	118°30'	V-8	0816	0831	456	0-135	33	33
97.55	31°25'	118°50'	V-8	1111	1126	454	0-138	71	71
97.60	31°16'	119°10'	V-8	1416	1431	474	0-127	76	76
97.65	31°05.5'	119°31'	V-8	1713	1728	440	0-142	39	39
97.70	30°55.5'	119°50.5'	V-8	2011	2025	438	0-136	80	80
97.75	30°45'	120°11'	V-8	2316	2331	441	0-136	93	93
97.80	30°35'	120°31'	V-9	0216	0230	515	0-116	62	62
97.85	30°25'	120°51'	V-9	0521	0536	467	0-138	15	15
97.90	30°11'	121°12'	V-9	0906	0921	510	0-138	10	10
100.29	31°42'	116°43'	V-11	0341	0356	436	0-138	83	83
100.30	31°41'	116°46.5'	V-11	0211	0226	476	0-121	78	78
100.35	31°31'	117°06.5'	V-10	2321	2336	499	0-131	104	104
100.40	31°21'	117°27'	V-10	2006	2021	503	0-133	62	62
100.45	31°11'	117°46'	V-10	1721	1736	455	0-139	35	35
100.50	31°02'	118°08'	V-10	1441	1456	479	0-139	23	23
100.55	30°53'	118°28'	V-10	1141	1156	560	0-112	11	11
100.60	30°45'	118°49'	V-10	0836	0850	482	0-137	25	25
100.65	30°33'	119°09'	V-10	0601	0616	474	0-135	23	23
100.70	30°23'	119°29'	V-10	0256	0311	455	0-140	18	18
100.75	30°12'	119°48'	V-9	2241	2256	492	0-128	30	30
100.80	30°02'	120°07'	V-9	1941	1956	495	0-140	18	18
100.85	29°51'	120°27'	V-9	1701	1716	469	0-142	9	9
100.90	29°41'	120°46'	V-9	1406	1421	505	0-133	12	12
103.30	31°05'	116°25'	V-11	0918	0925	262	0-72	103	103
103.35	30°56'	116°43'	V-11	1156	1211	467	0-134	21	21
103.40	30°45'	117°05'	V-11	1516	1531	411	0-147	27	27
103.45	30°30'	117°18'	V-11	1816	1831	441	0-136	23	23
103.50	30°21'	117°42'	V-11	2126	2141	473	0-136	59	59
103.55	30°14'	118°04'	V-12	0041	0056	481	0-119	60	60

Plankton Volumes, Cruise 5805, May 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
103.60	30°05'	118°23'	V-12	0406	0420	490	0-133	33	33
103.65	29°55'	118°43'	V-12	0711	0726	457	0-138	26	26
103.70	29°47.5'	119°04'	V-12	1011	1026	482	0-135	10	10
103.75	29°37'	119°24'	V-12	1321	1336	493	0-127	12	12
103.80	29°26'	119°43'	V-12	1631	1646	460	0-141	13	13
103.85	29°15'	120°04'	V-12	1921	1936	440	0-143	23	23
103.90	29°10'	120°19.5'	V-12	2156	2211	480	0-138	48	48
107.32			Occupied. Sample spoiled						
107.35	30°22'	116°20'	V-14	1711	1726	426	0-132	61	61
107.40	30°12.5'	116°45'	V-14	1411	1425	460	0-112	65	65
107.45	30°05.5'	117°03.5'	V-14	1126	1140	416	0-134	91	91
107.50	29°53.5'	117°23'	V-14	0736	0750	395	0-142	66	66
107.55	29°42.5'	117°43'	V-14	0416	0431	418	0-140	50	50
107.60	29°32'	118°01'	V-14	0036	0051	433	0-145	111	111
107.65	29°20.5'	118°20'	V-13	1926	1941	474	0-153	65	65
107.70	29°12'	118°40'	V-13	1616	1631	487	0-148	23	23
107.75	29°06'	119°01'	V-13	1311	1325	537	0-122	32	32
107.80	28°56.5'	119°22'	V-13	0826	0841	527	0-144	21	21
107.85	28°46'	119°42.5'	V-13	0516	0531	488	0-143	64	64
107.90	28°38'	119°58'	V-13	0201	0216	538	0-137	48	48
110.33	29°50.5'	115°52.2'	V-21	1503	1510	179	0-74	313	313
110.35	29°46.5'	116°00'	V-21	1336	1350	334	0-142	51	51
110.40	29°38.8'	116°23.2'	V-21	0931	0945	474	0-143	21	21
110.45	29°26.2'	116°39.5'	V-21	0721	0735	449	0-137	18	18
110.50	29°16.5'	116°59'	V-21	0446	0500	390	0-142	26	26
110.55	29°06.2'	117°18.2'	V-21	0151	0206	380	0-142	71	71
110.60	28°56.5'	117°39'	V-20	2306	2320	441	0-134	73	73
110.65	28°46.5'	117°58'	V-20	1946	2000	427	0-140	42	42
110.70	28°36.5'	118°18'	V-20	1646	1700	468	0-138	21	21
110.75	28°27.6'	118°38.8'	V-20	1346	1400	421	0-138	12	12
110.80	28°20.8'	118°57.2'	V-20	1116	1130	413	0-141	15	15
110.85	28°06.2'	119°16.5'	V-20	0816	0830	359	0-140	25	25
110.90	27°56.5'	119°36'	V-20	0510	0525	404	0-142	15	15
113.30	29°22.5'	115°17.5'	V-18	1129	1134	151	0-49	13	13
113.35	29°12'	115°39'	V-18	1431	1436	335	0-139	137	137
113.40	29°01'	115°57.2'	V-18	1806	1820	440	0-138	11	11
113.45	28°52'	116°18'	V-18	2111	2126	443	0-142	43	43
113.50	28°41'	116°39.5'	V-19	0026	0040	401	0-145	50	50
113.55	28°30'	117°02'	V-19	0426	0440	392	0-139	36	36

Plankton Volumes, Cruise 5805, May 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
113.60	28°19'	117°22'	V-19	0711	0726	396	0-140	20	20
113.65	28°13.7'	117°35.5'	V-19	0911	0926	410	0-142	12	12
113.70	28°02'	117°55.5'	V-19	1141	1156	419	0-138	17	17
113.75	27°52'	118°14.8'	V-19	1431	1445	403	0-144	12	12
113.80	27°43.5'	118°35'	V-19	1716	1730	450	0-135	13	13
113.85	27°32'	118°53.2'	V-19	2021	2035	408	0-140	56	56
113.90	27°22'	119°12.2'	V-19	2326	2340	457	0-139	22	22
117.26	28°56'	114°41'	V-18	0543	0550	214	0-67	61	61
117.30	28°48'	114°56.5'	V-18	0317	0328	180	0-99	256	256
117.35	28°38'	115°16'	V-18	0006	0020	224	0-139	64	64
117.40	28°28'	115°35.5'	V-17	1811	1826	318	0-140	19	19
117.45	28°18'	115°55.2'	V-17	1356	1410	331	0-148	21	21
117.50	28°07.5'	116°16'	V-17	1006	1020	352	0-141	17	17
117.55	27°57.7'	116°34.5'	V-17	0656	0710	337	0-138	27	27
117.60	27°55.7'	116°48'	V-17	0416	0430	303	0-141	49	49
117.65	27°43'	117°09.8'	V-17	0106	0120	261	0-145	77	77
117.70	27°31'	117°31.7'	V-16	2136	2151	297	0-141	57	57
117.75	27°19'	112°51.7'	V-16	1831	1846	332	0-156	15	15
117.80	27°07.8'	118°11.5'	V-16	1516	1530	326	0-148	18	18
117.85	26°58'	118°30.5'	V-16	1201	1215	383	0-139	8	8
117.90	26°47.7'	118°50'	V-16	0856	0910	371	0-140	13	13
118.39	28°18.5'	115°24'	V-17	2026	2040	325	0-124	117	117
119.33	28°19'	114°53'	V-14	1627	1638	222	0-102	72	72
120.25	28°23'	114°14.5'	V-14	1059	1104	174	0-47	121	121
120.30	28°13'	114°34'	V-14	1344	1351	197	0-90	81	81
120.35	28°03'	114°54'	V-14	1913	1921	137	0-70	226	226
120.40	27°56.5'	115°14'	V-14	2128	2132	85	0-25	47	47
120.45	27°43'	115°33'	V-15	0006	0021	308	0-148	75	75
120.50	27°33'	115°52.5'	V-15	0311	0326	375	0-138	69	69
120.55	27°23'	116°12'	V-15	0641	0655	322	0-140	59	59
120.60	27°13'	116°31.5'	V-15	0921	0936	364	0-135	22	22
120.65	27°02.5'	116°51'	V-15	1216	1230	371	0-141	30	30
120.70	26°52.2'	117°10'	V-15	1501	1515	396	0-139	18	18
120.75	26°42.5'	117°30'	V-15	1756	1810	391	0-139	13	13
120.80	26°32.5'	117°48.5'	V-15	2036	2051	354	0-141	45	45
120.85	26°22.5'	118°08.8'	V-16	0001	0016	327	0-146	21	21
120.90	26°13'	118°27.5'	V-16	0256	0310	347	0-141	25	25
123.37	27°24'	114°39.7'	V-13	2208	2214	212	0-56	118	118
123.42	27°15.5'	115°00.2'	V-13	1436	1450	444	0-145	5	5

Plankton Volumes, Cruise 5805, May 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
123.50	26°58'	115°30.5'	V-13	1006	1020	421	0-140	2	2
123.55	26°46.7'	115°51.8'	V-13	0606	0620	403	0-139	17	17
123.60	26°37.8'	116°09.8'	V-13	0306	0321	388	0-141	26	26
127.34	26°55.3'	114°06'	V-12	0543	0550	244	0-63	25	25
127.40	26°43.5'	114°29.5'	V-12	0856	0910	350	0-152	26	26
127.45	26°33.5'	114°48.7'	V-12	1151	1205	265	0-143	132	132
127.50	26°23.5'	115°08'	V-12	1506	1520	388	0-140	39	39
127.55	26°13.5'	115°27.2'	V-12	1806	1820	348	0-143	17	17
127.60	26°03.5'	115°46.5'	V-12	2106	2120	349	0-142	86	86
130.30	26°29'	113°29'	V-12	0013	0020	184	0-71	136	136
130.35	26°19'	113°48.5'	V-11	2126	2140	370	0-142	179	179
130.40	26°10.6'	114°06.7'	V-11	1816	1831	318	0-140	50	50
130.45	25°59'	114°25.5'	V-11	1516	1530	343	0-143	47	47
130.50	25°49'	114°46'	V-11	1211	1226	343	0-143	61	61
130.55	25°38.4'	115°04.2'	V-11	0901	0915	350	0-142	26	26
130.60	25°30.4'	115°28.5'	V-11	0551	0606	382	0-141	34	34
133.25	26°04.5'	112°48'	V-10	0248	0255	262	0-69	57	57
133.30	25°54.5'	113°07.5'	V-10	0546	0600	492	0-139	14	14
133.35	25°44.5'	113°26.5'	V-10	1201	1216	427	0-145	33	33
133.40	25°32.8'	113°43.4'	V-10	1506	1521	437	0-139	59	59
133.45	25°21.8'	113°59.8'	V-10	1806	1820	441	0-139	125	125
133.50	25°14.5'	114°24'	V-10	2201	2215	386	0-144	124	124
137.23	25°34.2'	112°18.7'	V-9	2058	2106	256	0-71	66	66
137.30	25°20'	112°45.5'	V-9	1701	1716	465	0-141	28	28
137.35	25°10'	113°04.5'	V-9	1156	1210	482	0-141	33	33
137.40	25°00'	113°23.5'	V-9	0726	0741	506	0-138	32	32
137.45	24°50'	113°42.5'	V-9	0356	0410	455	0-149	224	224
137.50	24°40'	114°01.5'	V-9	0050	0105	473	0-142	61	61

Plankton Volumes, Cruise 5806, June 1958

50.47	39°46'	123°54'	VI-14	1732	1742	339	0-98	56	56
50.50	39°40'	124°07.8'	VI-14	1921	1935	434	0-144	124	124
50.55	39°30'	124°30'	VI-14	2346	2400	484	0-138	229	229
50.60	39°20'	124°52'	VI-15	0311	0326	525	0-124	84	84
53.52	39°02'	123°51.2'	VI-14	1027	1037	290	0-89	499	499
53.55	38°56'	124°04.5'	VI-14	0811	0826	428	0-140	458	458
53.60	38°46'	124°26.3'	VI-14	0401	0416	496	0-136	99	99

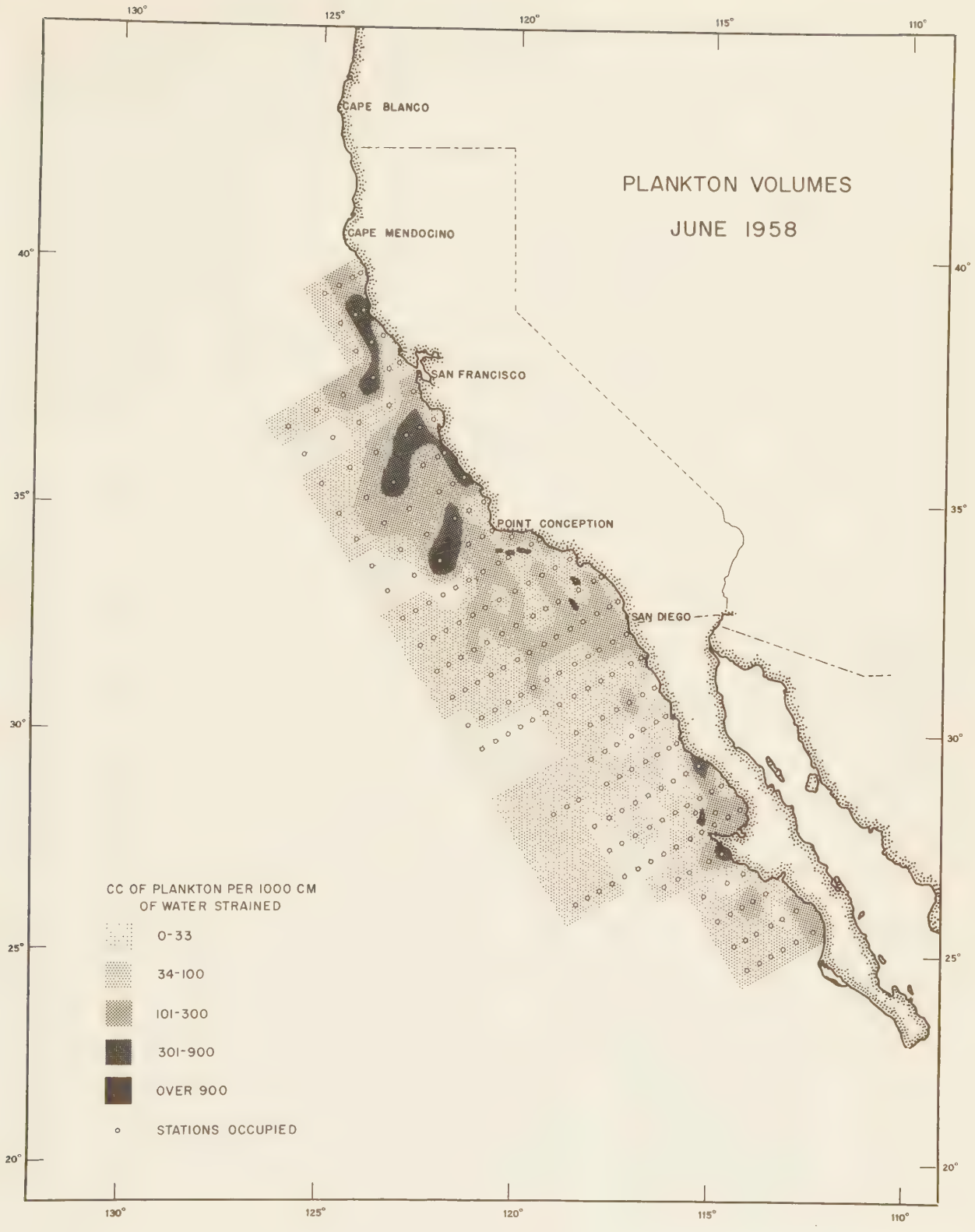

Figure 9.--Plankton volumes, June 1958.

Plankton Volumes, Cruise 5806, June 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
57.51	38°30'	123°22'	VI-13	1439	1449	340	0-100	79	79
57.55	38°22'	123°39.5'	VI-13	1716	1731	468	0-144	327	327
57.60	38°11.8'	124°01.8'	VI-13	2015	2030	472	0-152	49	49
60.52	37°53.5'	123°01.9'	VI-11	2113	2120	265	0-70	45	45
60.55	37°47.5'	123°15'	VI-11	1832	1842	334	0-94	69	69
60.60	37°37'	123°37'	VI-11	1501	1516	479	0-139	688	688
60.70	37°20.2'	124°21'	VI-11	0831	0845	460	0-141	224	224
60.80	36°59'	125°05.9'	VI-11	0216	0230	475	0-137	55	55
60.90	36°37'	125°47'	VI-10	1851	1906	467	0-145	51	51
63.52	37°19'	122°36.2'	VI-9	1303	1312	267	0-79	142	142
63.55			Occupied. Sample lost						
63.60	37°02.5'	123°10.7'	VI-9	1806	1820	(472)	0-136	(91)	(91)
63.70	36°42.8'	123°55'	VI-9	2326	2341	487	0-139	74	74
63.80	36°23'	124°37.6'	VI-10	0556	0610	459	0-139	30	30
63.90	36°01'	125°23'	VI-10	1201	1215	478	0-143	29	29
67.50	36°49'	122°04.6'	VI-9	0722	0733	332	0-101	69	69
67.55	36°39'	122°26'	VI-9	0436	0450	471	0-145	535	535
67.60	36°26.4'	122°52.3'	VI-9	0051	0105	481	0-142	307	307
67.70	36°08'	123°30'	VI-8	1946	2000	489	0-143	245	245
67.80	35°48.2'	124°12.1'	VI-8	1426	1441	(467)	0-142	(34)	(34)
67.90	35°28'	124°55'	VI-8	0931	0946	480	0-142	54	54
70.52	36°08.5'	121°49.8'	VI-7	0446	0501	459	0-138	523	523
70.55	36°03'	122°02'	VI-7	0636	0650	427	0-133	248	248
70.60	35°53'	122°23'	VI-7	1026	1040	486	0-139	253	253
70.70	35°33'	123°06'	VI-7	1526	1540	456	0-141	699	699
70.80	35°13'	123°48'	VI-7	2031	2045	416	0-141	214	214
70.90	34°53'	124°30'	VI-8	0206	0220	488	0-140	55	55
73.51	35°35.5'	121°20'	VI-6	2336	2350	477	0-140	614	614
73.55	35°27.5'	121°37.5'	VI-6	2056	2110	(476)	0-135	(223)	(223)
73.60	35°18'	121°58.4'	VI-6	1736	1750	(473)	0-136	(266)	(266)
73.70	34°58.2'	122°34.8'	VI-6	1221	1236	(473)	0-136	(265)	(265)
73.80	34°38.2'	123°21.7'	VI-6	0741	0756	478	0-140	109	109
73.90	34°18.9'	124°03'	VI-6	0136	0150	447	0-142	36	36
77.50	35°04.4'	120°52'	VI-4	2042	2055	439	0-115	86	86
77.55	34°54.5'	121°13'	VI-4-5	2351	0005	510	0-137	63	63
77.60	34°44'	121°34'	VI-5	0306	0321	470	0-139	340	340
77.70	34°24.2'	122°16'	VI-5	0846	0900	(482)	0-141	(158)	(158)
77.80	34°04.2'	122°57'	VI-5	1356	1410	475	0-143	51	51
77.90	33°45.5'	123°38.2'	VI-5	1941	1955	468	0-142	17	17

Plankton Volumes, Cruise 5806, June 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
80.51	34°26'	120°31.5'	VI-4	1558	1606	284	0-78	92	92
80.55	34°17.5'	120°47.5'	VI-4	1926	1941	490	0-141	175	175
80.60	34°08'	121°08'	VI-4-5	2356	0015	499	0-142	130	130
80.70	33°44.5'	121°51.5'	VI-5	0616	0630	478	0-140	1035	1035
80.80	33°29'	122°26'	VI-5	1236	1250	516	0-141	33	33
80.90	33°10'	123°16'	VI-5	1916	1930	475	0-141	32	32
82.47	34°16'	119°57'	VI-7	0516	0531	441	0-142	200	200
83.40	34°14'	119°21.5'	VI-7	0955	0957	74	0-14	134	134
83.43	34°08'	119°34'	VI-7	0811	0826	441	0-139	68	68
83.51	33°52'	120°06'	VI-7	0057	0108	335	0-100	45	45
83.55	33°44'	120°24'	VI-6	2216	2231	474	0-140	177	177
83.60	33°33.5'	120°45'	VI-6	1916	1931	477	0-136	109	109
83.65	33°24'	121°05'	VI-6	1611	1625	479	0-139	48	48
83.70	33°16'	121°28'	VI-6	1316	1330	481	0-140	21	21
83.75	33°07.5'	121°44'	VI-6	1056	1111	458	0-139	28	28
83.80	32°56'	122°08'	VI-6	0706	0721	450	0-141	38	38
83.85	32°45'	122°28'	VI-6	0406	0421	479	0-141	75	75
83.90	32°34.5'	122°48'	VI-6	0056	0110	474	0-141	84	84
87.35	33°50'	118°37.5'	VI-8	1616	1631	505	0-144	53	53
87.40	33°40'	118°58.5'	VI-8	1926	1941	434	0-141	78	78
87.45	33°29.5'	119°18'	VI-8-9	2356	0010	462	0-143	165	165
87.50	33°20'	119°39'	VI-9	0418	0426	288	0-71	56	56
87.55	33°10'	120°01'	VI-9	0826	0841	469	0-138	113	113
87.60	33°00'	120°21'	VI-9	1246	1300	460	0-142	37	37
87.65	32°47'	120°44'	VI-9	1806	1820	458	0-141	107	107
87.70	32°36'	121°02'	VI-9	2026	2041	458	0-140	155	155
87.75	32°24'	121°27'	VI-10	0036	0050	506	0-137	51	51
87.80	32°14'	121°48'	VI-10	0411	0426	418	0-138	69	69
87.85	32°06.5'	122°02.5'	VI-10	0701	0716	442	0-141	66	66
87.90	31°58'	122°19'	VI-10	1021	1036	439	0-141	59	59
90.28	33°28.5'	117°46.5'	VI-12	0806	0821	462	0-141	67	67
90.30	33°25'	117°55'	VI-12	0651	0706	448	0-141	103	103
90.37	33°11'	118°24'	VI-12	0241	0255	443	0-141	84	84
90.45	32°50'	119°01'	VI-11	2106	2121	458	0-141	166	166
90.50	32°42'	119°13'	VI-11	1716	1730	458	0-141	96	96
90.55	32°32.5'	119°34.5'	VI-11	1436	1450	467	0-142	41	41
90.60	32°24'	119°54'	VI-11	1136	1151	459	0-140	131	131
90.65	32°15'	120°18'	VI-11	0826	0840	472	0-142	115	115
90.70	32°01.5'	120°45'	VI-11	0406	0420	455	0-141	57	57

Plankton Volumes, Cruise 5806, June 1958 (cont'd)

Position				Time (PST)		Vol. water strained	Depth of haul in	Vol. per 1000 C.M. strained	
			(1958)					Total	Sm. org.
Sta.	N. lat.	W. long.	Date	Start	End	C.M.	meters	cc.	cc.
90.75	31°53'	121°02'	VI-11	0056	0110	490	0-134	106	106
90.80	31°45'	121°19'	VI-10	2126	2141	452	0-146	69	69
90.85	31°37'	121°35'	VI-10	1906	1920	452	0-142	46	46
90.90	31°27'	121°55'	VI-10	1556	1610	465	0-140	56	56
93.27	32°56'	117°19'	VI-19	2007	2016	309	0-141	81	81
93.30	32°50'	117°31.5'	VI-19	2216	2231	462	0-142	149	149
93.35	32°40'	117°52'	VI-20	0106	0120	377	0-146	278	278
93.40	32°32'	118°16.5'	VI-20	0426	0440	424	0-143	137	137
93.45	32°22'	118°36.5'	VI-20	0706	0720	427	0-144	131	131
93.50	32°15'	118°54'	VI-20	1006	1021	464	0-141	205	205
93.55	32°00'	119°13.5'	VI-20	1331	1346	469	0-141	234	234
93.60	31°50'	119°34'	VI-20	1636	1650	437	0-141	105	105
93.65	31°42.5'	119°57.5'	VI-20	1936	1950	434	0-144	37	37
93.70	31°32'	120°16'	VI-20	2206	2221	445	0-143	81	81
93.75	31°21'	120°35'	VI-21	0056	0111	458	0-142	57	57
93.80	31°10'	120°55'	VI-21	0341	0355	426	0-142	63	63
93.85	31°01'	121°15'	VI-21	0631	0645	457	0-142	50	50
93.90	30°49'	121°33.5'	VI-21	0911	0926	459	0-141	68	68
97.30	32°15.5'	117°09.5'	VI-23	0159	0204	201	0-44	124	124
97.35	32°05'	117°28'	VI-22	2316	2331	449	0-139	109	109
97.40	31°54'	117°47'	VI-22	2011	2026	464	0-142	112	112
97.45	31°41'	118°06.5'	VI-22	1656	1710	474	0-141	51	51
97.50	31°33'	118°28.5'	VI-22	1356	1411	484	0-141	60	60
97.55	31°24.5'	118°48'	VI-22	1116	1131	468	0-142	34	34
97.60	31°14'	119°10'	VI-22	0816	0831	465	0-141	43	43
97.65	31°06'	119°31'	VI-22	0456	0511	462	0-140	676	269
97.70	30°55.5'	119°50.5'	VI-22	0151	0206	477	0-141	59	59
97.75	30°45'	120°11'	VI-21	2246	2301	481	0-142	54	54
97.80	30°35'	120°31'	VI-21	1936	1951	472	0-142	68	68
97.85	30°25'	120°50.5'	VI-21	1626	1641	472	0-142	55	55
97.90	30°16'	121°10'	VI-21	0136	0150	466	0-138	19	19
100.29	31°41'	116°45.5'	VI-23	0746	0801	472	0-139	182	182
100.33	31°34'	117°00'	VI-23	1006	1021	448	0-143	87	87
100.40	31°21'	117°27'	VI-23	1411	1425	483	0-139	58	58
100.45	31°11'	117°47'	VI-23	1726	1741	489	0-142	47	47
100.50	31°01'	118°07'	VI-23	2036	2051	468	0-141	92	92
100.55	30°51'	118°26'	VI-23	1156	0010	457	0-142	57	57
100.60	30°42'	118°45'	VI-24	0316	0330	470	0-141	66	66
100.65	30°33'	119°03'	VI-24	0626	0641	464	0-142	34	34

Plankton Volumes, Cruise 5806, June 1958 (cont'd)

Sta.	Position N. lat.	W.long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
100.70	30°21'	119°27.5'	VI-24	1106	1121	431	0-142	19	19
100.75	30°11.5'	119°45'	VI-24	1406	1420	450	0-144	13	13
100.80	30°01'	120°07'	VI-24	1736	1751	468	0-140	19	19
100.85	29°53'	120°25.5'	VI-24	2006	2021	479	0-140	21	21
100.90	29°47'	120°40'	VI-24	2256	2311	478	0-142	31	31
103.30	31°05.5'	116°25'	VI-16	1038	1045	235	0-138	20	20
103.35	30°55'	116°45'	VI-16	1346	1400	445	0-139	56	56
103.40	30°45.5'	117°03.5'	VI-16	1646	1700	463	0-140	32	32
103.45	30°34'	117°25'	VI-16	1957	2006	452	0-141	69	69
103.50	30°22.5'	117°46.5'	VI-16	2301	2316	484	0-140	54	54
103.55	30°11'	118°07.5'	VI-17	0206	0220	488	0-138	68	68
103.60	29°59'	118°28.5'	VI-17	0446	0500	489	0-141	35	35
107.32	30°26.6'	116°10.9'	VI-16	0506	0521	449	0-142	80	80
107.35	30°20.5'	116°23.3'	VI-16	0256	0310	452	0-141	55	55
107.40	30°10.7'	116°43.5'	VI-15-16	2351	0005	493	0-141	63	63
107.45	30°00.9'	117°04.1'	VI-15	2046	2100	467	0-144	101	101
107.50	29°40'	117°23.8'	VI-15	1736	1750	445	0-143	31	31
107.55	29°42.8'	117°42.9'	VI-15	1436	1450	465	0-141	34	34
107.60	29°34'	118°04'	VI-15	1136	1151	455	0-141	40	40
110.33	29°50.5'	115°50.2'	VI-14	1151	1205	447	0-137	45	45
110.35	29°46.5'	116°01'	VI-14	1316	1330	448	0-143	29	29
110.40	29°36.6'	116°20.8'	VI-14	1636	1651	452	0-144	40	40
110.45	29°26'	116°41.1'	VI-14	1936	1951	442	0-144	36	36
110.50	29°15'	117°03.5'	VI-14	2241	2256	448	0-145	67	67
110.55	29°04.8'	117°27.1'	VI-15	0156	0210	459	0-144	57	57
110.60	28°54.2'	117°49.5'	VI-15	0501	0515	457	0-143	35	35
110.70	28°35.2'	118°15'	VI-21	2041	2056	474	0-152	57	57
110.75	28°25.5'	118°35'	VI-21	1748	1802	520	0-139	52	52
110.80	28°16'	118°57'	VI-21	1459	1513	577	0-134	62	62
113.30	29°23'	115°17.5'	VI-23	0045	0051	262	0-48	818	818
113.35	29°12'	115°43.5'	VI-22	2056	2110	507	0-114	85	85
113.40	29°02.2'	116°03'	VI-22	1804	1818	524	0-142	27	27
113.45	28°54'	116°22.2'	VI-22	1511	1525	601	0-129	38	38
113.50	28°51'	116°36.5'	VI-22	1246	1300	625	0-131	10	10
113.55	28°39'	116°55'	VI-22	0956	1010	538	0-146	41	41
113.60	28°26.2'	117°15.5'	VI-22	0702	0716	531	0-134	19	19
113.65	28°14'	117°35'	VI-22	0411	0425	531	0-134	43	43
113.70	28°02'	117°55.5'	VI-22	0116	0130	536	0-142	32	32
117.26	28°58'	114°41'	VI-19	1832	1838	278	0-63	40	40

Plankton Volumes, Cruise 5806, June 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
117.30	28°46'	114°55.5'	VI-19	2029	2040	346	0-110	167	167
117.35	28°38'	115°16'	VI-19	2316	2330	449	0-150	90	90
117.40	28°28'	115°35.5'	VI-20	0142	0155	560	0-129	68	68
117.45	28°18'	115°55.2'	VI-20	1516	1530	559	0-102	38	38
117.50	28°06.5'	116°15.2'	VI-20	1806	1830	529	0-141	28	28
117.55	27°56'	116°35.4'	VI-20	2036	2050	483	0-147	62	62
117.60	27°45.5'	116°55'	VI-20	2336	2346	496	0-148	34	34
117.65	27°35'	117°15'	VI-21	0211	0225	577	0-132	33	33
117.70	27°24.5'	117°35.5'	VI-21	0441	0445	549	0-135	15	15
118.39	28°18.5'	115°24'	VI-20	0342	0355	528	0-136	34	34
119.33	28°19'	114°53.8'	VI-19	0827	0837	320	0-100	156	156
120.25	28°23'	114°14.5'	VI-19	1310	1317	273	0-41	223	223
120.30	28°13'	114°34'	VI-19	1043	1052	319	0-80	173	173
120.35	28°04'	114°52.2'	VI-19	0520	0527	204	0-68	128	128
120.40	27°56.5'	115°14'	VI-19	0305	0308	158	0-30	51	51
120.45	27°47'	115°32.8'	VI-19	0036	0050	573	0-133	96	96
120.50	27°37'	115°53'	VI-18	2131	2145	489	0-147	49	49
120.55	27°27.8'	116°13'	VI-18	1746	1800	541	0-135	28	28
120.60	27°17.8'	116°31.5'	VI-18	1451	1505	572	0-135	19	19
120.65	27°07.5'	116°50'	VI-18	1216	1231	572	0-133	17	17
120.70	26°56'	117°11.2'	VI-18	0916	0930	484	0-146	33	33
120.75	26°46'	117°30'	VI-18	0636	0650	539	0-131	63	63
120.80	26°35'	117°48.5'	VI-18	0336	0350	567	0-135	62	62
120.85	26°24'	118°07'	VI-18	0026	0046	542	0-127	37	37
120.90	26°12.8'	118°26.5'	VI-17	2115	2129	491	0-149	43	43
123.37	27°24'	114°39.7'	VI-16	2126	2134	214	0-134	402	402
123.42	27°12.5'	115°00.8'	VI-16	2344	2359	442	0-136	104	104
123.50	26°55'	115°32.5'	VI-17	0348	0402	523	0-136	59	59
123.55	26°44'	115°52.9'	VI-17	0616	0630	470	0-131	77	77
123.60	26°33.5'	116°14'	VI-17	0846	0900	423	0-145	38	38
127.34	26°54'	114°06'	VI-16	1553	1600	151	0-68	100	100
127.40	26°38.3'	114°31.3'	VI-16	1232	1247	495	0-133	30	30
127.45	Occupied. Sample spoiled								
127.50	26°17.5'	115°10'	VI-16	0656	0711	427	0-129	61	61
130.30	26°29'	113°29'	VI-15	1358	1406	275	0-125	69	69
130.35	26°18'	113°48.5'	VI-15	1716	1730	453	0-132	101	101
130.40	26°07'	114°07.2'	VI-15	1951	2005	378	0-141	116	116
130.45	25°56.2'	114°26.8'	VI-15	2302	2317	417	0-144	55	55
130.50	25°43.5'	114°46.8'	VI-16	0146	0201	559	0-124	59	59

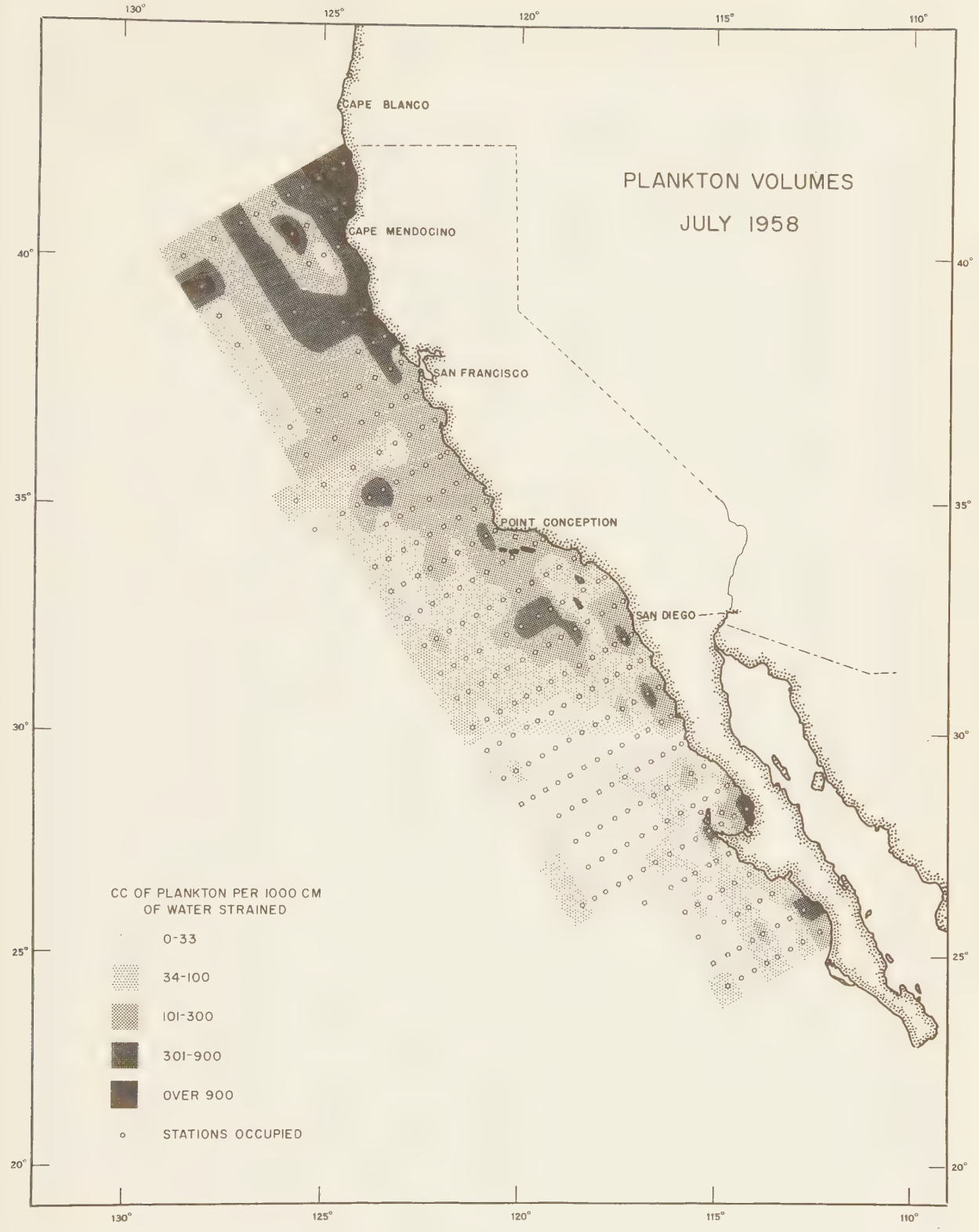

Figure 10.--Plankton volumes, July 1958.

Plankton Volumes, Cruise 5806, June 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
133.25	26°03'	112°47.7'	VI-8	1048	1055	244	0-76	160	160
133.30	25°51.5'	113°06.5'	VI-8	0821	0836	485	0-148	29	29
133.35	25°39.5'	113°29'	VI-8	0511	0525	504	0-142	63	63
133.40	25°30'	113°47.4'	VI-8	0226	0240	502	0-142	46	46
133.45	25°20.5'	114°05.5'	VI-8	2356	0010	518	0-139	54	54
133.50	25°11'	114°23.5'	VI-7	2111	2125	518	0-143	54	54
137.23	25°32'	112°18.2'	VI-7	0013	0019	227	0-44	220	220
137.30	25°19'	112°43.8'	VI-7	0331	0346	394	0-146	71	71
137.35	25°08.8'	113°03'	VI-7	0648	0702	396	0-148	66	66
137.40	24°58.7'	113°22'	VI-7	1006	1020	330	0-148	39	39
137.45	24°48.5'	113°41.5'	VI-7	1231	1246	364	0-145	69	69
137.50	24°38.5'	114°00'	VI-7	1516	1531	408	0-140	64	64

Plankton Volumes, Cruise 5807, July 1958

40.38	41°47.5'	124°28'	VII-6	0900	0912	389	0-106	776	776
40.40	41°43'	124°38'	VII-6	1046	1100	503	0-127	302	302
40.45	41°33.9'	124°59'	VII-6	1346	1400	489	0-138	1178	1178
40.50	41°24'	125°21'	VII-6	1656	1710	429	0-130	573	573
40.55	41°14'	125°44.2'	VII-6	2006	2021	466	0-140	781	781
40.60	41°03.9'	126°07'	VII-6	2231	2246	401	0-158	194	194
40.65	40°53.5'	126°30'	VII-7	0151	0206	499	0-141	248	248
40.70	40°43'	126°53.2'	VII-7	0521	0536	474	0-145	447	447
40.80	40°23'	127°38'	VII-7	1031	1046	477	0-148	159	159
40.90	40°05.8'	128°10'	VII-7	1541	1556	460	0-144	274	274
43.42	41°04.2'	124°20.5'	VII-6	0336	0350	502	0-124	1366	1366
43.45	40°58.3'	124°34.8'	VII-6	0146	0200	486	0-135	350	350
43.50	40°45.2'	125°08.2'	VII-5	2126	2140	460	0-140	661	661
43.55	40°33.8'	125°26'	VII-5	1831	1846	441	0-145	256	256
43.60	40°25.1'	125°45'	VII-5	1521	1535	480	0-128	973	973
43.90	39°29.5'	127°52'	VII-7	2156	2211	485	0-141	2114	2114
47.50	40°13.2'	124°31.6'	VII-5	0331	0346	569	0-120	622	622
47.55	40°03.4'	124°54.2'	VII-5	0556	0610	459	0-138	87	87
47.60	39°51.8'	125°19.5'	VII-5	0930	0944	480	0-142	139	139
47.90	38°54.2'	127°30'	VII-8	0256	0310	464	0-145	99	99
50.70	39°06'	125°38'	VII-8	2206	2221	465	0-150	336	336
50.80	38°42.5'	126°23.2'	VII-8	1636	1650	473	0-143	222	222
50.90	38°19'	127°07.5'	VII-8	0806	0820	504	0-141	40	40

Plankton Volumes, Cruise 5807, July 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
53.52	39°02.3'	123°51.2'	VII-17	1406	1416	254	0-96	552	552
53.55	38°56.3'	124°02.5'	VII-17	1126	1141	443	0-138	609	609
53.60	38°46.5'	124°26.4'	VII-17	0751	0806	415	0-139	494	494
57.51	38°30'	123°22'	VII-16	1858	1907	352	0-93	697	697
57.55	38°22.1'	123°39.5'	VII-16	2126	2140	415	0-146	417	417
57.60	38°12.2'	124°01.5'	VII-17	0121	0136	428	0-118	276	276
60.52	37°53.5'	123°02.5'	VII-9	2030	2038	243	0-73	234	234
60.55	37°47.5'	123°15'	VII-9	2208	2216	247	0-72	794	794
60.60	37°37'	123°37'	VII-10	0111	0126	468	0-143	184	184
60.65	37°27'	123°59'	VII-10	0501	0516	462	0-142	188	188
60.70	37°17'	124°21'	VII-10	0736	0751	491	0-140	232	232
60.80	36°57'	125°04'	VII-10	1326	1340	457	0-148	133	133
60.90	36°37'	125°47'	VII-10	1845	1900	(477)	0-140	(55)	(55)
63.52	37°19'	122°36.2'	VII-11	2143	2150	239	0-68	213	213
63.55	37°14'	122°49.5'	VII-11	2005	2020	(488)	0-135	(146)	(146)
63.60	37°32.5'	123°12'	VII-11	1656	1710	456	0-140	189	189
63.65	36°53'	123°32'	VII-11	1411	1425	454	0-143	178	178
63.70	36°42'	123°55'	VII-11	1100	1115	435	0-151	280	280
63.80	36°22.5'	124°18'	VII-11	0536	0550	497	0-141	163	163
63.90	36°03'	125°21'	VII-10	2336	2350	440	0-150	200	200
67.50	36°49'	122°04.6'	VII-12	0221	0235	488	0-131	217	217
67.55	36°39'	122°26'	VII-12	0500	0520	(493)	0-132	168	168
67.60	36°29'	122°47.5'	VII-12	0806	0820	441	0-143	241	241
67.65	36°19'	123°08.5'	VII-12	1111	1126	447	0-148	22	22
67.70	36°07.5'	123°29'	VII-12	1340	1354	493	0-140	53	53
67.80	35°47'	124°12.5'	VII-12	1821	1836	473	0-140	38	38
67.90	35°28.5'	124°52'	VII-12	2321	2336	469	0-146	38	38
67.100	35°09'	125°33'	VII-13	0411	0426	511	0-138	59	59
70.52	36°09'	121°48'	VII-14	1756	1811	444	0-133	248	248
70.55	36°02.8'	122°01.8'	VII-14	1516	1531	483	0-122	187	187
70.60	35°49.5'	122°23'	VII-14	1116	1131	460	0-137	117	117
70.65	34°41.9'	122°43'	VII-14	0756	0811	478	0-142	115	115
70.70	35°29.8'	123°12'	VII-14	0241	0255	450	0-144	129	129
70.75	35°20.4'	123°31.8'	VII-13-14	2346	0001	471	0-129	350	350
70.80	35°07.5'	123°50'	VII-13	2311	2326	463	0-152	371	371
70.85	34°39'	124°10'	VII-13	1940	1954	(471)	0-142	142	142
70.90	34°51.5'	124°27'	VII-13	1526	1540	476	0-145	46	46
70.100	34°32.5'	125°09'	VII-13	0906	0920	504	0-140	32	32
73.51	35°35.2'	121°21.3'	VII-12	1746	1801	496	0-128	240	240

Plankton Volumes, Cruise 5807, July 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
73.55	35°28.3'	121°36.5'	VII-12	2016	2031	444	0-145	153	153
73.60	35°19.6'	121°58.4'	VII-12-13	2346	0001	451	0-127	300	300
73.65	35°11'	122°20.3'	VII-13	0321	0336	468	0-134	188	188
73.70	33°00.5'	122°43.4'	VII-13	0626	0640	457	0-127	145	145
73.75	34°51.3'	123°03'	VII-13	1011	1026	408	0-144	137	137
73.80	34°41.1'	123°24.1'	VII-13	1311	1325	452	0-134	86	86
77.50	35°05.6'	120°53.3'	VII-11	0816	0829	403	0-123	188	188
77.55	34°54.2'	121°13.6'	VII-11	0456	0510	423	0-138	203	203
77.60	34°44.5'	121°34'	VII-11	0026	0041	497	0-130	221	221
77.65	34°32.3'	121°57'	VII-10	2051	2106	490	0-125	273	273
77.70	34°24.8'	122°16.5'	VII-10	1616	1631	512	0-111	168	168
77.75	34°11.3'	122°35.6'	VII-10	1246	1301	496	0-126	69	69
77.80	34°02.6'	122°56.2'	VII-10	0916	0931	474	0-130	55	55
77.85	33°53.8'	123°17.9'	VII-10	0616	0630	518	0-114	50	50
77.90	33°45.8'	123°39.5'	VII-10	0201	0216	437	0-142	92	92
80.51	34°26.5'	120°32.5'	VII-8	1323	1331	264	0-67	129	129
80.55	34°18.6'	120°48.4'	VII-8	1601	1616	535	0-116	310	310
80.60	34°08.5'	121°09'	VII-8	1936	1951	413	0-145	208	208
80.65	33°57.5'	121°28.2'	VII-8	2326	2341	387	0-159	85	85
80.70	33°46.2'	121°49.2'	VII-9	0243	0258	443	0-141	149	149
80.75	33°35.5'	122°09.8'	VII-9	0636	0650	461	0-138	204	204
80.80	33°24.8'	122°30.5'	VII-9	0936	0951	356	0-143	45	45
80.85	33°15.7'	122°51.5'	VII-9	1341	1356	401	0-152	(30)	(30)
80.90	33°10'	123°14'	VII-9	1646	1700	456	0-135	46	46
82.47	34°14.5'	119°58'	VII-7	2001	2016	456	0-143	143	143
83.40	34°13.5'	119°21.7'	VII-8	0200	0202	84	0-11	251	251
83.43	34°07.1'	119°34.4'	VII-7	2331	2346	443	0-139	188	188
83.51	33°51.5'	120°07.4'	VII-7	1541	1553	295	0-96	227	227
83.55	33°43.3'	120°23.8'	VII-7	1301	1316	453	0-135	146	146
83.60	33°33.5'	120°44.2'	VII-7	0946	1001	443	0-141	185	185
83.65	33°24.1'	121°04.1'	VII-7	0651	0706	449	0-137	82	82
83.70	33°14'	121°25.4'	VII-7	0311	0326	463	0-140	56	56
83.75	33°04.3'	121°46.3'	VII-6-7	2351	0006	463	0-149	65	65
83.80	32°54'	122°07.8'	VII-6	2001	2016	500	0-137	70	70
83.85	32°41.7'	122°25'	VII-6	1706	1721	428	0-142	30	30
83.90	32°27'	122°42.8'	VII-6	1331	1346	438	0-141	68	68
87.35	33°50'	118°37.5'	VII-4	1246	1301	458	0-138	188	188
87.40	33°41'	118°58.8'	VII-4	1616	1631	381	0-140	47	47
87.45	33°30'	119°19'	VII-4	2026	2041	492	0-143	73	73

Plankton Volumes, Cruise 5807, July 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
87.50	33°20'	119°39'	VII-5	0008	0015	237	0-61	278	278
87.55	33°10'	120°00.5'	VII-5	0306	0321	519	0-122	116	116
87.60	33°00'	120°21.2'	VII-5	1036	1051	450	0-136	80	80
87.65	32°41.5'	120°41.6'	VII-5	1426	1441	456	0-134	57	57
87.70	32°30.5'	121°00'	VII-5	1716	1731	445	0-140	40	40
87.75	32°20.7'	121°18.6'	VII-5	2101	2116	437	0-143	78	78
87.80	32°10'	121°37.2'	VII-6	0001	0016	477	0-144	48	48
87.85	31°59'	121°56'	VII-6	0351	0406	416	0-150	111	111
87.90	31°48.9'	122°19.4'	VII-6	0701	0716	445	0-137	81	81
90.28	33°28.6'	117°47.7'	VII-2	2216	2231	(536)	0-124	86	86
90.30	33°24.4'	117°55.5'	VII-3	0031	0046	452	0-138	60	60
90.37	33°10.5'	118°23.5'	VII-3	0526	0541	447	0-138	67	67
90.45	32°55.5'	118°56.5'	VII-3	1326	1340	429	0-136	91	91
90.50	32°44.5'	119°15'	VII-3	1638	1644	169	0-55	307	307
90.55	32°34'	119°36.5'	VII-3	2106	2121	435	0-130	506	506
90.60	32°22.5'	119°57.5'	VII-4	0110	0126	426	0-140	399	399
90.65	32°09'	120°15'	VII-4	0420	0435	429	0-141	224	224
90.70	Occupied. Sample not quantitative								
90.75	31°43'	121°00'	VII-4	1226	1240	424	0-138	45	45
90.80	31°38.5'	121°20'	VII-4	1546	1601	415	0-142	39	39
90.85	31°35'	121°39'	VII-4	1856	1910	430	0-140	79	79
90.90	31°25'	122°00'	VII-4-5	2351	0006	443	0-140	45	45
93.27	32°56.7'	117°20'	VII-7	0056	0110	402	0-143	189	189
93.30	32°50'	117°32.3'	VII-6	2216	2231	454	0-122	101	101
93.35	32°34.5'	117°50.5'	VII-6	1821	1836	411	0-140	158	158
93.40	32°29.5'	118°10.5'	VII-6	1601	1616	432	0-141	83	83
93.45	32°14.5'	118°34'	VII-6	1201	1216	413	0-137	305	305
93.50	32°01.5'	118°44'	VII-6	0856	0911	444	0-132	135	135
93.55	31°52'	119°08'	VII-6	0526	0541	429	0-142	175	175
93.60	31°43.5'	119°32'	VII-6	0211	0226	454	0-136	189	189
93.65	31°35'	119°54'	VII-5	2226	2241	512	0-125	94	94
93.70	31°27.5'	120°14.5'	VII-5	1916	1931	439	0-142	59	59
93.75	31°20'	120°34'	VII-5	1521	1536	423	0-139	64	64
93.80	31°14'	120°56'	VII-5	1226	1241	427	0-137	54	54
93.85	31°01.5'	121°18.5'	VII-5	0826	0841	420	0-147	74	74
93.90	30°51.5'	121°38'	VII-5	0626	0640	423	0-141	57	57
97.30	32°15.5'	117°09'	VII-7	2303	2312	310	0-48	139	139
97.32	32°11.5'	117°16.2'	VII-8	0106	0121	421	0-144	309	309
97.35	32°05.5'	117°31'	VII-8	0310	0326	452	0-140	128	128

Plankton Volumes, Cruise 5807, July 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
97.40	31°56'	117°50'	VII-8	0641	0656	456	0-144	86	86
97.45	31°46.5'	118°10'	VII-8	0941	0956	426	0-152	66	66
97.50	31°36'	118°30.5'	VII-8	1406	1420	463	0-141	231	231
97.55	31°26'	118°50'	VII-8	1716	1731	477	0-141	42	42
97.60	31°14.2'	119°08.5'	VII-8	2116	2131	479	0-134	63	63
97.65	31°02'	119°27.5'	VII-9	0041	0056	458	0-141	87	87
97.70	30°47.5'	119°47.5'	VII-9	0436	0451	457	0-140	35	35
97.75	30°35.5'	120°08'	VII-9	0801	0816	507	0-133	49	49
97.80	30°21'	120°32'	VII-9	1206	1220	460	0-138	56	56
97.85	30°20'	120°50'	VII-9	1451	1505	474	0-138	23	23
97.90	30°15.5'	121°10'	VII-9	1816	1831	447	0-138	45	45
100.30	31°40.8'	116°46.5'	VII-12	2151	2206	562	0-121	55	55
100.35	31°30.8'	117°06.8'	VII-13	0056	0110	480	0-136	75	75
100.40	31°20.8'	117°27.2'	VII-13	0446	0501	496	0-142	54	54
100.45	31°13.8'	117°35'	VII-11	0916	0931	530	0-131	98	98
100.50	31°03'	117°57'	VII-11	0556	0611	501	0-142	92	92
100.55	30°52'	118°19.5'	VII-11	0216	0230	515	0-138	49	49
100.60	30°41'	118°41'	VII-10	2241	2256	522	0-135	31	31
100.65	30°31'	119°04'	VII-10	1821	1836	488	0-142	18	18
100.70	30°20.5'	119°26.2'	VII-10	1446	1500	481	0-140	12	12
100.75	30°09.5'	119°48'	VII-10	1041	1056	514	0-131	18	18
100.80	30°00'	120°08'	VII-10	0701	0716	449	0-140	13	13
100.85	29°50.2'	120°28'	VII-10	0316	0330	454	0-139	33	33
100.90	29°42.5'	120°48'	VII-10	0006	0021	494	0-140	32	32
103.30	31°05.2'	116°25'	VII-13	1158	1204	225	0-54	266	266
103.35	30°55.6'	116°45.3'	VII-13	1521	1535	523	0-131	325	325
103.40	30°45.2'	117°05.5'	VII-13	1836	1850	500	0-140	52	52
103.45	30°38'	117°24'	VII-13	2141	2156	525	0-132	105	105
103.50	30°24'	117°43'	VII-14	0126	0140	492	0-140	22	22
103.55	30°10.5'	118°03'	VII-14	0431	0446	512	0-142	12	12
103.60	29°57'	118°23.5'	VII-14	0806	0821	528	0-135	6	6
103.65	29°41'	118°46.7'	VII-14	1116	1131	544	0-132	2	2
103.70	29°39.7'	119°04'	VII-14	1416	1430	515	0-140	10	10
103.75	29°36.8'	119°24.2'	VII-14	1706	1721	498	0-143	10	10
103.80	29°25.5'	119°46'	VII-14	2051	2106	522	0-136	15	15
103.85	29°14.7'	120°08.7'	VII-14-15	2356	0011	481	0-140	37	37
103.90	29°04'	120°31.2'	VII-15	0336	0351	503	0-142	20	20
107.32	30°25'	116°12'	VII-18	0546	0601	489	0-140	153	153
107.35	30°20'	116°23'	VII-18	0336	0351	501	0-134	128	128

Plankton Volumes, Cruise 5807, July 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
107.40	30°09.8'	116°42.8'	VII-17-18	2346	0001	506	0-140	32	32
107.45	29°58.2'	116°59.5'	VII-17	2006	2021	574	0-126	10	10
107.50	29°49.5'	117°20.5'	VII-17	1701	1716	516	0-141	6	6
107.55	29°41'	117°42'	VII-17	1321	1335	481	0-139	2	2
107.60	29°33.5'	118°01'	VII-16	1051	1106	560	0-129	2	2
107.65	29°18.1'	118°26'	VII-16	0506	0521	509	0-141	10	10
107.70	29°10'	118°44'	VII-16	0146	0200	515	0-139	19	19
107.75	29°00.5'	119°00'	VII-15	2146	2201	532	0-130	30	30
107.80	28°51'	119°19.2'	VII-15	1836	1851	510	0-143	10	10
107.85	28°43'	119°37.2'	VII-15	1506	1521	511	0-140	12	12
107.90	28°26'	120°08'	VII-15	1016	1031	539	0-130	11	11
110.33	29°49.9'	115°52'	VII-18	1018	1026	293	0-67	20	20
110.35	29°46.8'	116°00'	VII-18	1201	1216	505	0-141	12	12
110.40	29°34.8'	116°19'	VII-18	1536	1551	484	0-138	12	12
110.45	29°23.8'	116°37.2'	VII-18	1940	1955	500	0-142	12	12
110.50	29°12'	116°58'	VII-18	2221	2236	563	0-134	28	28
110.55	29°00'	117°20'	VII-19	0131	0146	491	0-137	37	37
110.60	28°47.6'	117°41'	VII-19	0511	0526	494	0-144	12	12
110.65	28°37.5'	118°02'	VII-19	0951	1006	539	0-130	4	4
110.70	28°31.8'	118°17.4'	VII-19	1241	1256	488	0-140	2	2
110.75	28°24.5'	118°36'	VII-19	1506	1520	476	0-135	2	2
110.80	28°17.2'	118°56'	VII-19	1751	1806	525	0-142	4	4
113.30	29°22.5'	115°17.5'	VII-21	1333	1338	157	0-48	13	13
113.35	29°15.3'	115°37.5'	VII-21	1036	1050	445	0-145	148	148
113.40	Occupied. Sample not quantitative								
113.45	28°47.3'	116°17.5'	VII-21	0236	0250	440	0-145	36	36
113.50	28°40'	116°37.5'	VII-20	2236	2250	478	0-141	36	36
113.55	28°32'	116°57'	VII-20	1936	1951	453	0-146	15	15
113.60	28°22'	112°16.5'	VII-20	1331	1336	470	0-142	13	13
113.65	28°11.2'	117°38'	VII-20	1246	1301	455	0-143	7	7
113.70	28°03'	117°55'	VII-20	0936	0950	453	0-147	13	13
113.75	27°51.2'	118°15'	VII-20	0706	0720	477	0-142	13	13
113.80	27°41'	118°36.2'	VII-20	0321	0335	483	0-142	33	33
117.26	28°56'	114°41'	VII-18	0308	0314	225	0-64	258	258
117.30	28°48'	114°56.5'	VII-18	0528	0536	271	0-84	26	26
117.35	28°38'	115°16'	VII-18	0816	0829	465	0-130	13	13
117.40	28°28'	115°35.5'	VII-18	2021	2036	474	0-140	19	19
117.45	28°18'	115°55.2'	VII-19	0011	0025	459	0-149	39	39
117.50	28°08'	116°15'	VII-19	0306	0320	457	0-142	57	57

Plankton Volumes, Cruise 5807, July 1958 (cont'd)

Sta.	Position N.lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
117.55	27°57.5'	116°36.5'	VII-19	0626	0640	455	0-137	20	20
117.60	27°47.5'	116°54'	VII-19	0851	0905	484	0-136	2	2
117.65	27°37.5'	117°13.2'	VII-19	1226	1240	447	0-142	9	9
117.70	27°27.5'	117°32.5'	VII-19	1506	1520	458	0-142	15	15
117.75	27°17.5'	117°52'	VII-19	1826	1841	517	0-132	12	12
117.80	27°07.5'	118°11'	VII-19	2126	2140	478	0-139	29	29
118.39	28°18.5'	115°24'	VII-18	1136	1150	449	0-138	4	4
119.33	28°19'	114°53'	VII-17	1627	1636	347	0-90	104	104
120.25	28°23'	114°14.5'	VII-17	2206	2211	190	0-48	400	400
120.30	28°13'	114°34'	VII-17	1903	1911	296	0-85	165	165
120.35	28°03'	114°54'	VII-17	1340	1355	176	0-58	34	34
120.40	27°56.5'	115°14'	VII-17	1108	1112	135	0-35	815	815
120.45	27°44.2'	115°33.7'	VII-17	0746	0800	443	0-144	14	14
120.50	27°33.5'	115°53'	VII-17	0431	0446	462	0-143	24	24
120.55	27°23'	116°13'	VII-17	0136	0151	464	0-144	47	47
120.60	27°13'	116°31.5'	VII-16	2150	2204	508	0-133	75	75
120.65	27°03'	116°51'	VII-16	1836	1850	464	0-138	13	13
120.70	26°52.5'	117°12'	VII-16	1446	1501	432	0-143	25	25
120.75	26°45'	117°29'	VII-16	1141	1156	442	0-146	18	18
120.80	26°32.5'	117°48.5'	VII-16	0756	0810	529	0-134	13	13
120.85	26°23'	118°08'	VII-16	0506	0520	480	0-133	21	21
120.90	26°13'	118°27.5'	VII-16	0111	0125	453	0-143	73	73
123.37	27°24'	114°39.7'	VII-14	1813	1820	229	0-60	13	13
123.42	27°14'	114°59.3'	VII-14	2036	2050	473	0-137	59	59
123.45	27°08'	115°11'	VII-14-15	2356	0010	453	0-143	33	33
123.50	26°57.5'	115°30'	VII-15	0241	0256	451	0-136	47	47
123.55	26°47.2'	115°49'	VII-15	0556	0611	478	0-134	13	13
123.60	26°36.5'	116°08'	VII-15	0836	0850	482	0-141	12	12
123.70	26°18.5'	116°47'	VII-15	1701	1715	474	0-138	17	17
127.34	26°55.3'	114°06'	VII-14	1218	1225	275	0-74	94	94
127.40	26°36'	114°26'	VII-14	0751	0806	409	0-144	39	39
127.45	26°27.5'	114°45.2'	VII-14	0456	0510	457	0-138	35	35
127.50	26°19'	115°04'	VII-14	0136	0151	423	0-147	26	26
127.55	26°10'	115°24.5'	VII-13	2246	2300	354	0-145	56	56
127.60	26°02'	115°44'	VII-13	1921	1936	478	0-141	13	13
130.30	26°29'	113°29'	VII-12	1848	1855	230	0-63	52	52
130.35	26°19'	113°48.5'	VII-12	2156	2210	418	0-138	29	29
130.40	26°09'	114°07.5'	VII-13	0106	0121	472	0-143	34	34
130.45	25°58'	114°25'	VII-13	0431	0445	512	0-134	74	74

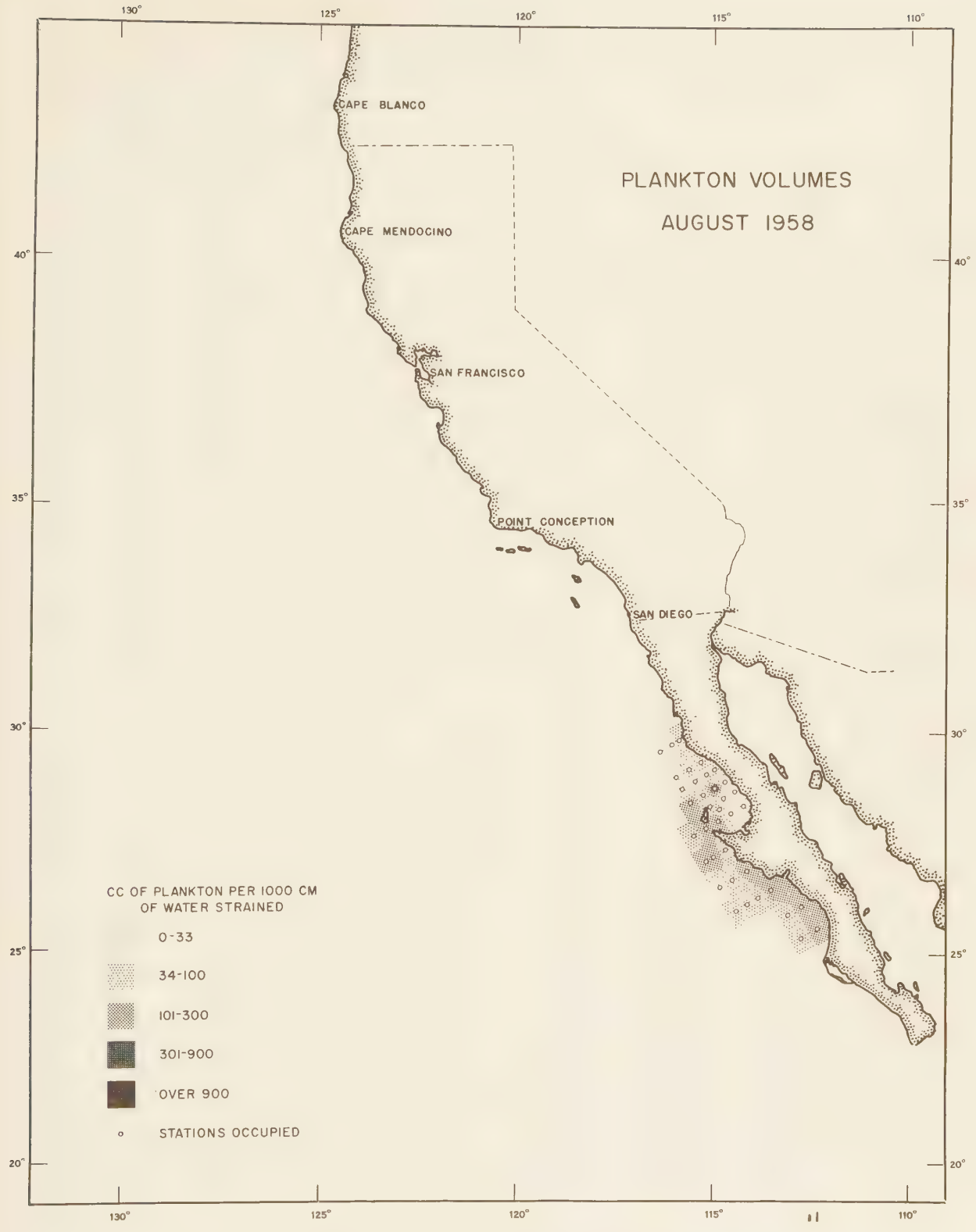

Figure 11.--Plankton volumes, August 1958.

Plankton Volumes, Cruise 5807, July 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
130.50	25°47.5'	114°44'	VII-13	0711	0725	479	0-133	17	17
130.55			Occupied. Sample spoiled						
130.60	25°23'	115°25'	VII-13	1336	1351	469	0-139	15	15
133.25	26°04.5'	112°48'	VII-12	0618	0624	234	0-59	385	385
133.30	25°54.5'	113°07.5'	VII-12	0311	0326	513	0-137	18	18
133.35	25°44.5'	113°26.5'	VII-12	1221	1236	461	0-141	26	26
133.40	25°34.5'	113°45.5'	VII-11	1946	2001	514	0-137	148	148
133.45	25°24.5'	114°04.5'	VII-11	1701	1715	485	0-130	99	99
133.50	25°13'	114°22'	VII-11	1224	1236	496	0-138	12	12
133.55	25°04'	114°42'	VII-11	0936	0950	478	0-142	21	21
133.60	24°54.5'	115°01.5'	VII-11	0616	0631	481	0-136	21	21
137.23	25°33'	112°18.7'	VII-10	0244	0249	225	0-59	173	173
137.30	25°20'	112°45.5'	VII-10	0629	0644	463	0-142	39	39
137.35	25°10'	113°04.5'	VII-10	0919	1934	598	0-113	18	18
137.40	25°00'	113°23.5'	VII-10	1236	1250	535	0-134	37	37
137.45	24°50'	113°42.5'	VII-10	1556	1610	516	0-135	37	37
137.50	24°40'	114°01.5'	VII-10	1848	1902	464	0-140	13	13
137.55	24°30'	114°20'	VII-10	2151	2206	478	0-142	25	25
137.60	24°20'	114°39.5'	VII-11	0036	0051	490	0-139	82	82

Plankton Volumes, Cruise 5808, August 1958

110.33	29°50.5'	115°52.2'	VIII-6	1342	1351	279	0-81	43	43
110.35	29°46.5'	116°00'	VIII-6	1216	1230	475	0-135	11	11
110.40	29°42'	116°19.5'	VIII-6	0931	0945	469	0-141	13	13
113.30	29°22.5'	115°17.5'	VIII-6	1859	1904	182	0-48	93	93
113.35	29°12'	115°39'	VIII-6	2136	2151	469	0-139	58	58
113.40	29°02'	115°58.5'	VIII-7	0051	0106	451	0-139	33	33
115.27	29°11'	114°55'	VIII-7	1403	1411	257	0-66	39	39
115.30	29°04'	115°08'	VIII-7	1128	1136	259	0-78	15	15
115.35	28°55'	115°27.5'	VIII-7	0831	0846	465	0-141	6	6
115.40	28°45'	115°47'	VIII-7	0451	0505	457	0-133	31	31
117.26	28°56'	114°41'	VIII-7	1643	1650	234	0-70	30	30
117.30	28°48'	114°56.5'	VIII-7	1918	1927	270	0-82	370	370
117.35	28°38'	115°16'	VIII-7	2226	2241	395	0-148	66	66
117.40	28°28'	115°35.5'	VIII-8	0131	0146	437	0-136	101	101
$118^{5}25$	28°40.5'	114°25.5'	VIII-8	1143	1151	226	0-69	9	9
$118^{5}30$	28°30.5'	114°45.5'	VIII-8	0907	0916	278	0-86	22	22

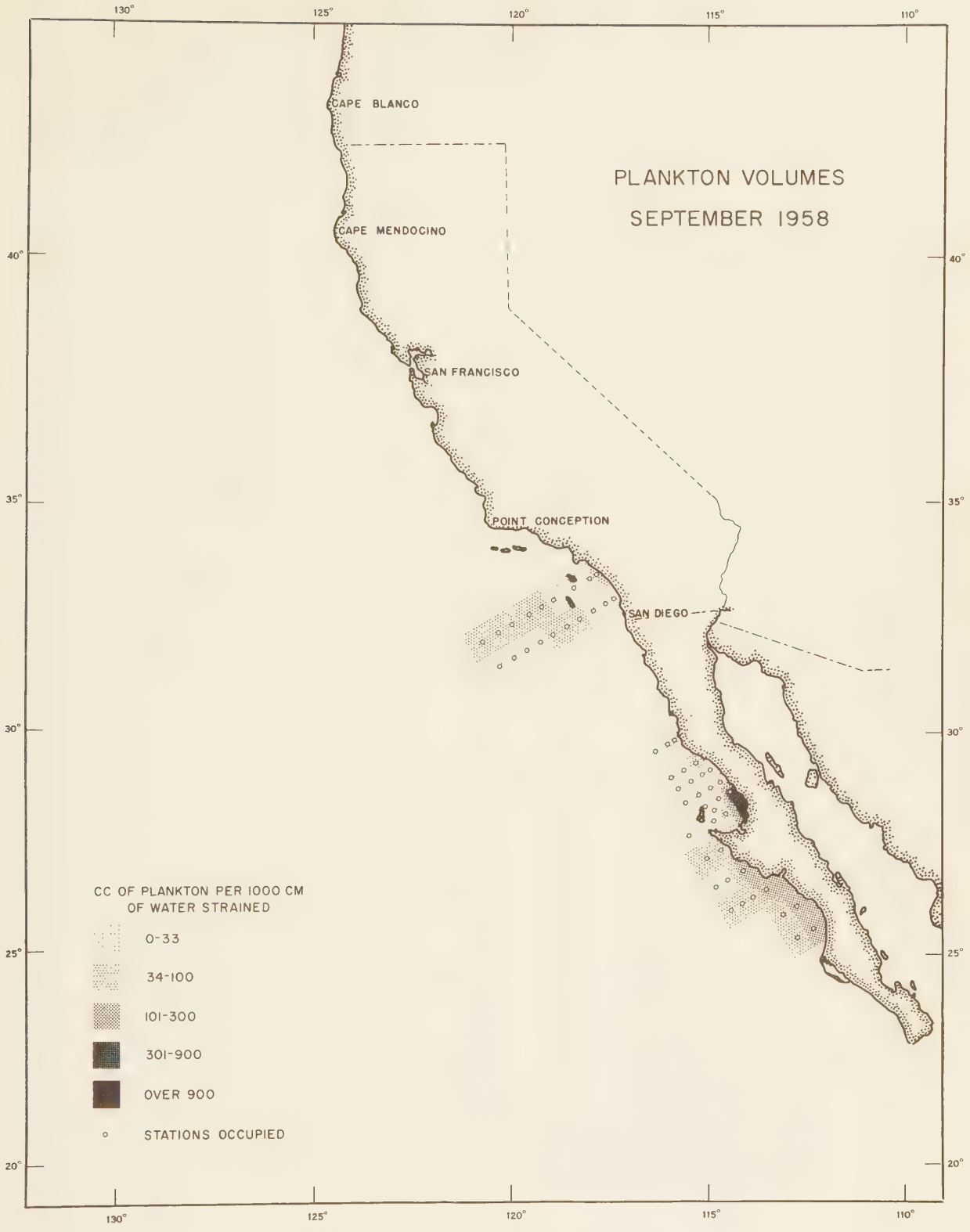

Figure 12.--Plankton volumes, September 1958.

Plankton Volumes, Cruise 5808, August 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
118[5]35	28°20.5'	115°05'	VIII-8	0512	0523	356	0-105	50	50
119.33	28°19'	114°53'	VIII-8	0707	0717	295	0-100	34	34
120.25	28°23'	114°14.5'	VIII-8	1419	1424	168	0-45	12	12
120.30	28°13'	114°34'	VIII-8	1703	1711	245	0-77	29	29
120.35	28°03'	114°54'	VIII-8	1938	1945	230	0-69	157	157
120.40	27°56.5'	115°14'	VIII-8	2144	2148	140	0-30	143	143
120.45	27°43'	115°33'	VIII-9	0101	0115	412	0-141	83	83
123.37	27°24'	114°39.7'	VIII-9	0958	1006	257	0-64	62	62
123.42	27°14'	114°59.7'	VIII-9	0716	0730	468	0-136	184	184
123.45	27°08'	115°11.2'	VIII-9	0511	0526	495	0-133	202	202
127.34	26°55.3'	114°06'	VIII-9	1543	1551	228	0-73	215	215
127.40	26°43.5'	114°29.5'	VIII-9	1851	1905	427	0-145	89	89
127.45	26°33.5'	114°48.7'	VIII-9	2141	2155	451	0-138	24	24
130.30	26°29'	113°29'	VIII-10	1233	1240	235	0-65	149	149
130.35	26°17.7'	113°47.2'	VIII-10	0946	1001	469	0-137	36	36
130.40	26°09'	114°07.5'	VIII-10	0631	0645	427	0-141	94	94
130.45	25°59'	114°25.7'	VIII-10	0321	0335	439	0-138	68	68
133.25	26°04.5'	112°48'	VIII-10	2224	2230	233	0-70	180	180
133.30	25°54.5'	113°07.5'	VIII-11	0115	0130	425	0-142	89	89
137.23	25°34.2'	112°18.7'	VIII-11	0918	0925	220	0-63	250	250
137.30	25°20'	112°45.5'	VIII-11	0551	0606	455	0-140	88	88

Plankton Volumes, Cruise 5809, September 1958

90.28	33°28.5'	117°46.8'	IX-9	2246	2301	496	0-141	30	30
90.28	33°28.1'	117°46.1'	IX-13	1926	1941	498	0-140	26	26
90.28	33°28.5'	117°46.8'	IX-16-17	2356	0011	331	0-141	85	85
90.30	33°24.5'	117°55'	IX-10	0046	0100	439	0-151	14	14
90.30	33°24.2'	117°55.5'	IX-13	2226	2240	470	0-142	23	23
90.30	33°24.5'	117°55'	IX-17	0211	0225	416	0-140	29	29
90.37	33°10.5'	118°23.5'	IX-10	0616	0630	486	0-144	4	4
90.37	33°10.5'	118°23.5'	IX-14	0404	0420	498	0-142	14	14
90.37	33°10.5'	118°23.5'	IX-17	0811	0825	445	0-141	7	7
90.45	32°55'	118°56'	IX-10	1226	1241	505	0-142	4	4
90.45	32°57'	118°56.6'	IX-14	0906	0920	600	0-136	5	5
90.45	32°55'	118°56'	IX-17	1416	1430	451	0-141	9	9
90.50	32°44'	119°15'	IX-10	1905	1920	526	0-136	40	40
90.50	32°45.5'	119°14.5'	IX-14	1318	1327	301	0-85	47	47

Plankton Volumes, Cruise 5809, September 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
90.50	32°44.1'	119°16.6'	IX-17	1801	1816	484	0-135	31	31
90.55	32°33.6'	119°37.3'	IX-10	2256	2310	476	0-143	32	32
90.55	32°34.3'	119°33.2'	IX-14	1716	1730	581	0-142	17	17
90.55	32°33.8'	119°38'	IX-17	2116	2130	463	0-131	56	56
90.60	32°22'	119°57.5'	IX-11	0501	0516	503	0-140	40	40
90.60	32°23.2'	119°52.5'	IX-14	2105	2121	359	0-138	86	86
90.60	32°25.1'	119°57.5'	IX-18	0126	0140	434	0-142	44	44
90.65	32°10.5'	120°18'	IX-11	0906	0920	487	0-139	23	23
90.65	32°12.5'	120°12'	IX-14-15	2351	0005	423	0-144	59	59
90.70	32°05.3'	120°36'	IX-11	1316	1330	511	0-135	27	27
90.70	32°01.3'	120°30'	IX-15	0347	0401	430	0-147	42	42
93.27	32°55'	117°21.5'	IX-13	1036	1050	475	0-141	17	17
93.27	32°55'	117°21.5'	IX-16	1616	1630	470	0-137	17	17
93.27	32°55'	117°21.5'	IX-19	0746	0800	487	0-136	66	66
93.30	32°50'	117°31.6'	IX-13	0746	0800	513	0-136	19	19
93.30	32°50.7'	117°31.5'	IX-16	1346	1400	479	0-137	2	2
93.30	32°50.7'	117°31.5'	IX-19	0516	0531	461	0-142	6	6
93.35	32°40'	117°52'	IX-13	0301	0315	389	0-144	15	15
93.35	32°39.7'	117°52.6'	IX-16	0926	0940	497	0-134	10	10
93.35	32°39.7'	117°52.6'	IX-19	0146	0200	457	0-138	24	24
93.40	32°31'	118°31'	IX-13	0006	0021	588	0-144	48	48
93.40	32°30.2'	118°13.7'	IX-16	0551	0606	461	0-141	30	30
93.40	32°30.6'	118°11.2'	IX-18	2236	2250	477	0-138	46	46
93.45	32°20.6'	118°31.5'	IX-12	1956	2011	524	0-135	11	11
93.45	32°15'	118°33'	IX-16	0126	0140	459	0-139	63	63
93.45	32°20.8'	118°32'	IX-18	1841	1856	493	0-141	45	45
93.50	32°08'	118°55'	IX-12	1536	1550	523	0-146	10	10
93.50	32°10.6'	118°53'	IX-15	2216	2231	472	0-137	112	112
93.50	32°10.5'	118°54.5'	IX-18	1521	1535	473	0-140	21	21
93.55	31°58'	119°13'	IX-12	1016	1030	500	0-136	6	6
93.55	31°59.5'	119°13.4'	IX-15	1826	1840	496	0-141	24	24
93.55	32°02.5'	119°13.3'	IX-18	1106	1120	481	0-135	31	31
93.60	31°46'	119°35'	IX-12	0616	0630	505	0-138	14	14
93.60	31°49.5'	119°32'	IX-15	1516	1530	465	0-141	4	4
93.60	31°52.5'	119°34.8'	IX-18	0736	0751	437	0-142	16	16
93.65	31°38'	119°55'	IX-12	0046	0101	512	0-140	43	43
93.65	31°38.5'	119°52'	IX-15	1126	1140	505	0-132	22	22
93.70	31°31'	120°14'	IX-11	2106	2120	522	0-139	50	50
93.70	31°30.2'	120°06'	IX-15	0901	0916	411	0-144	27	27

Plankton Volumes, Cruise 5809, September 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
110.33	29°50.5'	115°52.2'	IX-4	1747	1758	335	0-101	3	3
110.35	29°46.5'	116°00'	IX-4	1621	1635	431	0-141	2	2
110.40	29°36.5'	116°19.5'	IX-4	1342	1356	446	0-145	4	4
113.30	29°22.5'	115°17.5'	IX-4	2304	2310	185	0-49	60	60
113.35	29°12'	115°39'	IX-5	0222	0234	395	0-141	25	25
113.40	29°02'	115°58.2'	IX-5	0532	0544	446	0-138	9	9
115.27	29°11'	114°55'	IX-5	1823	1829	194	0-58	31	31
115.30	29°05'	115°08'	IX-5	1608	1615	249	0-70	4	4
115.35	28°55'	115°27.5'	IX-5	1301	1316	492	0-139	2	2
115.40	28°45'	115°47'	IX-5	0933	0948	443	0-141	5	5
117.26	28°56'	114°41'	IX-5	2128	2136	241	0-73	4	4
117.30	28°48'	114°56.5'	IX-5	2337	2347	332	0-99	18	18
117.35	28°38'	115°16'	IX-6	0311	0326	452	0-142	29	29
117.40	28°28'	115°35.5'	IX-6	0557	0611	499	0-139	10	10
118^{5}25	28°40.5'	114°25.5'	IX-6	1803	1810	239	0-73	314	314
118^{5}30	28°30.5'	114°45.5'	IX-6	1508	1516	293	0-83	31	31
118^{5}35	28°20.5'	115°05'	IX-6	1112	1121	322	0-85	19	19
119.33	28°19'	114°53'	IX-6	1303	1311	300	0-81	20	20
120.30	28°13'	114°34'	IX-7	0058	0106	(283)	0-83	(46)	(46)
120.35	28°03'	114°54'	IX-7	0713	0721	247	0-68	28	28
120.40	Occupied. Sample spoiled								
120.45	27°43'	115°33'	IX-7	1341	1355	455	0-143	13	13
123.37	27°24'	114°39.7'	IX-8	0553	0561	272	0-68	48	48
123.42	27°13.2'	115°01.2'	IX-8	0231	0246	470	0-138	64	64
123.45	Occupied. Sample spoiled								
127.34	26°55.3'	114°06'	IX-8	1138	1146	245	0-69	118	118
127.40	26°43.5'	114°29.5'	IX-8	1441	1456	400	0-153	15	15
127.45	26°32.2'	114°48.5'	IX-8	1816	1831	465	0-139	24	24
130.30	26°29'	113°29'	IX-9	0908	0916	233	0-68	141	141
130.35	26°18.7'	113°48.5'	IX-9	0611	0625	444	0-139	36	36
130.40	26°09.2'	114°06.8'	IX-9	0301	0316	466	0-141	64	64
130.45	25°59'	114°26'	IX-8	2351	2306	388	0-137	41	41
133.25	26°04.5'	112°48'	IX-9	1713	1721	201	0-70	253	253
133.30	25°54.5'	113°07.5'	IX-9	1430	1438	253	0-70	87	87
137.23	25°34.2'	112°18.7'	IX-9	2208	2216	207	0-72	145	145
137.30	25°20'	112°45.5'	IX-10	0131	0146	419	0-151	64	64
	Plankton Volumes, Cruise 5810, October 1958								
60.52	37°53.4'	123°01.8'	XI-1	0243	0251	266	0-66	30	30

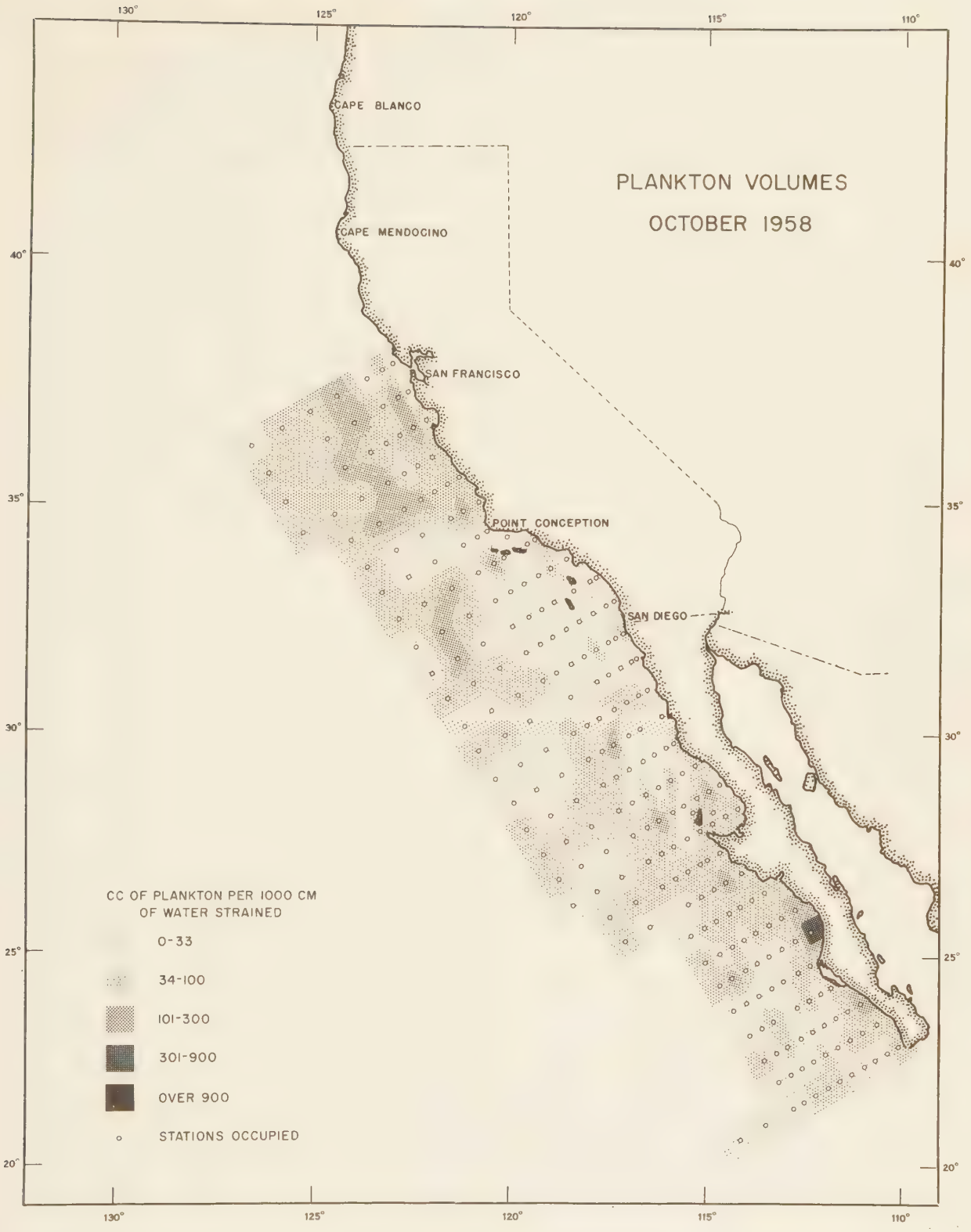

Figure 13.--Plankton volumes, October 1958.

Plankton Volumes, Cruise 5810, October 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
60.55	37°47.5'	123°15'	XI-1	0538	0545	212	0-54	52	52
60.60	37°37'	123°37'	XI-2	1536	1550	506	0-139	6	6
60.70	37°16.5'	124°22'	XI-2	2106	2121	461	0-148	211	211
60.80	36°57.5'	125°05'	XI-3	0206	0221	491	0-140	67	67
60.90	36°38.4'	125°48.8'	XI-3	0726	0740	506	0-136	67	67
60.100	36°18.7'	126°32.5'	XI-3	1251	1306	495	0-134	22	22
63.52	37°22.5'	122°38.2'	X-31	2158	2206	260	0-66	27	27
63.55	37°16'	122°50'	X-31	1946	1961	494	0-139	265	265
63.60	37°02.5'	123°12'	X-31	1616	1630	489	0-132	63	63
63.70	36°38'	123°56'	X-31	1041	1056	462	0-143	110	110
63.80	36°19'	124°36.5'	X-31	0436	0450	504	0-133	65	65
63.100	35°40.5'	125°57'	XI-3	1821	1836	509	0-123	39	39
67.50	36°49'	122°04.6'	X-30	0402	0412	370	0-71	68	68
67.55	36°39'	122°26'	X-30	0641	0656	475	0-134	101	101
67.60	36°29.5'	122°47.8'	X-30	1021	1036	461	0-133	85	85
67.65	36°17'	123°09'	X-16	0346	0400	475	0-138	70	70
67.70	36°08'	123°29.5'	X-30	1626	1640	464	0-135	37	37
67.80	35°47.8'	124°12.5'	X-30	2226	2241	461	0-146	143	143
67.100	35°07.6'	125°36'	XI-3	2326	2341	531	0-142	51	51
70.55	36°02'	122°01'	X-17	1921	1936	467	0-139	83	83
70.60	35°52'	122°23'	X-17	1426	1440	449	0-135	93	93
70.65	35°43'	122°44'	X-15	1251	1306	458	0-148	24	24
70.70	35°32.5'	123°05'	X-16	2316	2330	471	0-140	163	163
70.80	35°12'	123°47.5'	X-16	1126	1141	469	0-140	62	62
70.90	34°54.2'	124°30.5'	XI-4	1226	1240	511	0-137	39	39
70.100	34°28'	125°12.8'	XI-4	0441	0456	484	0-140	48	48
73.51	35°36.5'	121°22'	X-29	1726	1740	557	0-108	59	59
73.55	35°28.8'	121°37'	X-29	1506	1520	491	0-132	77	77
73.60	35°20'	121°52.5'	X-29	1130	1145	502	0-132	64	64
73.65	35°02.3'	122°17'	X-14	2006	2020	501	0-138	108	108
73.70	34°59.5'	122°36.5'	X-29	0516	0531	463	0-143	162	162
73.80	34°39'	123°20.2'	X-28	2241	2256	446	0-147	168	168
73.90	34°16.5'	124°03'	XI-4	1816	1830	479	0-142	56	56
77.50	35°04'	120°52'	X-27	2051	2100	395	0-130	51	51
77.55	34°54.5'	121°13'	X-28	0026	0040	421	0-137	107	107
77.60	34°45'	121°34'	X-28	0428	0443	489	0-139	51	51
77.70	34°27.5'	122°12.2'	X-28	0956	1011	445	0-146	20	20
77.80	34°07.5'	122°54.5'	X-28	1536	1551	496	0-131	22	22
77.90	33°44'	123°38'	XI-4	2336	2350	(466)	0-142	81	81

Plankton Volumes, Cruise 5810, October 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
80.51	34°26.5'	120°32.5'	X-27	1447	1458	328	0-102	27	27
80.55	34°21.8'	120°46'	X-27	1226	1241	473	0-134	25	25
80.60	34°09.5'	121°07'	X-27	0916	0931	444	0-144	29	29
80.70	33°48'	121°50.5'	X-27	0346	0400	(461)	0-147	28	28
80.80	33°29'	122°32'	X-26	2216	2231	452	0-144	33	33
80.90	33°05'	123°20'	X-26	1626	1641	467	0-136	41	41
82.47	34°15'	119°57.8'	X-25	1041	1056	486	0-135	12	12
83.40	34°13'	119°22'	X-24	0719	0722	(119)	0-12	34	34
83.43	34°08'	119°34'	X-24	0856	0911	466	0-134	21	21
83.51	33°52'	120°07.5'	X-25	1428	1436	302	0-53	10	10
83.55	33°44'	120°24.5'	X-25	1706	1721	462	0-137	112	112
83.60	33°35.2'	120°42.5'	X-25	1941	1956	477	0-136	29	29
83.70	33°13'	121°25.5'	X-26	0056	0110	526	0-123	114	114
83.80	32°52'	122°05'	X-26	0606	0621	487	0-129	49	49
83.90	32°30'	122°47'	X-26	1106	1121	487	0-137	53	53
87.35	33°50'	118°37.5'	X-24	0156	0210	453	0-134	27	27
87.40	33°40'	118°58.5'	X-23	2306	2321	434	0-141	60	60
87.45	33°30'	119°19'	X-23	2006	2021	463	0-136	32	32
87.50	33°20'	119°39.5'	X-23	1622	1631	283	0-61	7	7
87.55	33°09'	120°03'	X-23	1336	1350	484	0-136	17	17
87.60	33°00'	120°21'	X-23	1041	1056	487	0-138	6	6
87.70	32°36'	121°00'	X-23	0101	0116	495	0-131	73	73
87.80	32°18'	121°42'	X-22	2001	2016	479	0-134	102	102
87.90	32°00'	122°23'	X-22	1506	1520	513	0-128	8	8
90.28	33°28.5'	117°46.7'	X-20	2131	2146	516	0-125	27	27
90.30	33°24.5'	117°55'	X-21	0031	0045	480	0-132	25	25
90.37	33°10.5'	118°23.5'	X-21	0451	0505	440	0-129	9	9
90.45	32°55.5'	118°56.5'	X-21	0926	0941	426	0-139	31	31
90.50	32°45.3'	119°15.8'	X-21	1226	1240	458	0-133	11	11
90.55	32°34'	119°34.5'	X-21	1550	1610	548	0-112	5	5
90.60	32°24'	119°56'	X-21	1902	1917	487	0-130	86	86
90.70	32°04'	120°38'	X-22	2356	0010	475	0-149	19	19
90.80	31°43.8'	121°17'	X-22	0436	0451	508	0-130	112	112
90.90	31°24'	121°58'	X-22	0954	1009	511	0-133	22	22
93.27	32°55'	117°22'	X-20	0836	0850	437	0-140	5	5
93.30	32°50'	117°31.6'	X-20	0541	0555	483	0-134	8	8
93.35	32°40'	117°52'	X-20	0221	0236	436	0-133	32	32
93.40	32°30'	118°12'	X-19	2346	2400	431	0-140	25	25
93.45	32°20'	118°32'	X-19	2021	2036	462	0-144	26	26

Plankton Volumes, Cruise 5810, October 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
93.50	32°09'	118°46'	X-19	1736	1750	553	0-132	18	18
93.55	31°57.5'	119°08'	X-19	1416	1431	544	0-138	26	26
93.60	31°49'	119°31'	X-19	1141	1155	492	0-139	24	24
93.70	31°23.5'	120°16'	X-19	0511	0525	532	0-129	43	43
93.80	31°07'	120°56'	X-18	2336	2351	507	0-137	83	83
93.90	30°50'	121°35'	X-18	1801	1815	499	0-142	94	94
97.30	32°15.4'	117°08.8'	X-16	2028	2034	(177)	0-60	45	45
97.32	32°11.5'	117°17'	X-17	0116	0130	530	0-129	28	28
97.35	32°05.5'	117°29'	X-17	0306	0320	496	0-129	30	30
97.40	31°55.5'	117°50'	X-17	0636	0650	(486)	0-135	60	60
97.45	31°45'	118°09'	X-17	0916	0930	458	0-145	22	22
97.50	31°36'	118°29'	X-17	1411	1426	479	0-140	2	2
97.55	31°26'	118°52'	X-17	1626	1640	498	0-137	20	20
97.60	31°18'	119°10.5'	X-17	2011	2026	453	0-146	49	49
97.70	31°01.5'	119°47.5'	X-18	0206	0221	507	0-132	47	47
97.80	30°44.5'	120°25.8'	X-18	0711	0725	490	0-136	24	24
97.90	30°24.5'	121°11.8'	X-18	1251	1306	488	0-139	23	23
100.29	31°42'	116°43.5'	X-20	1136	1148	231	0-92	26	26
100.30	31°40.5'	116°46.5'	X-20	1046	1100	541	0-133	11	11
100.35	31°30.5'	117°10.5'	X-20	0656	0710	584	0-117	7	7
100.40	31°20.5'	117°29'	X-20	0351	0406	547	0-128	29	29
100.45	31°10.5'	117°49.5'	X-19	2340	2356	558	0-144	16	16
100.55	30°52'	118°29.5'	X-19	1711	1726	549	0-155	18	18
100.70	30°12.5'	119°40.5'	X-19	0701	0716	556	0-142	32	32
100.80	29°55'	120°12'	X-19	0041	0057	632	0-146	49	49
100.90	29°40.5'	120°39.5'	X-18	1841	1856	530	0-140	74	74
103.32	31°00'	116°33.5'	X-16	2141	2156	569	0-134	12	12
103.35	30°53.5'	116°45.5'	X-17	0021	0036	503	0-145	56	56
103.40	30°44.5'	117°06'	X-17	0411	0426	516	0-132	66	66
103.45	30°35'	117°24'	X-17	0656	0711	569	0-126	51	51
103.50	30°26'	117°46.5'	X-17	1041	1056	579	0-126	16	16
103.55	30°16'	118°05.5'	X-17	1336	1351	522	0-133	23	23
103.60	30°06'	118°24'	X-17	1800	1815	520	0-137	54	54
103.70	29°44.5'	119°08'	X-18	0016	0031	496	0-145	32	32
103.80	29°24'	119°51'	X-18	0631	0646	532	0-134	30	30
103.90	29°09.5'	120°25'	X-18	1141	1155	533	0-140	30	30
107.32	30°25.5'	116°10.5'	X-16	1541	1556	591	0-115	10	10
107.35	Occupied. Sample spoiled								
107.40	30°15'	116°34.5'	X-16	1041	1056	546	0-134	29	29

Plankton Volumes, Cruise 5810, October 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
107.45	30°04'	116°54'	X-16	0711	0726	546	0-141	29	29
107.50	29°54'	117°14'	X-16	0426	0440	544	0-138	101	101
107.55	29°44'	117°34.5'	X-16	0026	0041	524	0-141	67	67
107.60	29°33.5'	117°56'	X-15	2126	2140	557	0-130	54	54
107.70	29°13'	118°38.5'	X-15	1456	1511	525	0-145	11	11
107.80	28°49'	119°16'	X-15	0856	0911	540	0-143	11	11
107.90	28°25'	119°58'	X-15	0156	0211	556	0-139	32	32
110.33	29°50.4'	115°52.2'	X-13	0433	0441	284	0-64	63	63
110.35	29°46.3'	115°59.3'	X-13	0656	0710	525	0-142	11	11
110.40	29°35'	116°18.8'	X-13	1026	1041	538	0-138	15	15
110.45	29°24'	116°37.5'	X-13	1326	1341	556	0-134	11	11
110.50	29°13'	116°56.5'	X-13	1721	1736	584	0-129	22	22
110.55	29°02.5'	117°16'	X-13	2021	2036	564	0-132	85	85
110.60	28°52.5'	117°35.5'	X-13-14	2356	0010	600	0-177	68	68
110.70	28°31'	118°13'	X-14	0626	0641	576	0-130	52	52
110.80	28°11.5'	118°53'	X-14	1241	1255	556	0-138	18	18
110.90	27°52'	119°32.5'	X-14	1856	1911	562	0-134	64	64
113.30	29°23.7'	115°23.4'	X-12	2258	2304	284	0-54	42	42
113.35	29°17.8'	115°35.3'	X-12	2041	2056	562	0-129	14	14
113.40	29°08'	115°54'	X-12	1716	1730	604	0-135	60	60
113.45	28°57'	116°15.5'	X-12	1316	1330	536	0-140	22	22
113.50	28°46'	116°32.5'	X-12	1016	1031	565	0-128	35	35
113.55	28°34.5'	116°50.5'	X-12	0536	0550	518	0-153	31	31
113.60	28°23'	117°11'	X-12	0216	0230	561	0-140	46	46
113.70	28°02.5'	117°57'	X-11	1906	1920	533	0-145	51	51
113.80	27°44'	118°33.5'	X-11	1311	1326	535	0-145	67	67
113.90	27°26.5'	119°09'	X-11	0727	0740	565	0-133	34	34
117.26	28°53.2'	114°37.8'	X-9	0348	0354	225	0-57	22	22
117.30	28°44.5'	114°52.7'	X-9	0632	0641	416	0-87	106	106
117.35	28°31.6'	115°14.2'	X-9	0936	0951	563	0-126	41	41
117.40	28°28.3'	115°36'	X-9	1616	1631	565	0-133	27	27
117.45	28°18.9'	115°54.9'	X-9	1916	1931	581	0-131	93	93
117.50	28°10.5'	116°15'	X-9	2316	2330	590	0-131	102	102
117.55	28°00.8'	116°34.5'	X-10	0206	0221	534	0-142	79	79
117.60	27°51.5'	116°55.5'	X-10	0646	0701	579	0-134	54	54
117.70	27°32.5'	117°52.5'	X-10	1251	1305	558	0-138	13	13
117.80	27°10.5'	118°16'	X-10	1956	2011	619	0-119	31	31
117.90	26°54'	118°49.5'	X-11	0131	0146	566	0-136	35	35
118.39	28°18.3'	115°23'	X-9	1236	1253	565	0-145	41	41

Plankton Volumes, Cruise 5810, October 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
119.33	28°19'	114°53'	X-10	0913	0923	327	0-102	49	49
120.25	28°23'	114°14.5'	X-10	0329	0334	196	0-49	51	51
120.30	28°13'	114°34'	X-10	0623	0632	326	0-78	86	86
120.35	28°03'	114°54'	X-10	1144	1150	228	0-45	44	44
120.40	27°56.5'	115°14'	X-10	1428	1433	166	0-33	48	48
120.45	27°43'	115°33'	X-10	1706	1720	466	0-141	30	30
120.50	27°33'	115°52.5'	X-10	2031	2045	546	0-134	48	48
120.55	27°23.2'	116°12.5'	X-10-11	2356	0010	508	0-142	67	67
120.60	27°14.7'	116°32.8'	X-11	0246	0301	484	0-142	76	76
120.70	26°52.5'	117°10'	X-11	0816	0831	471	0-140	21	21
120.80	26°32.5'	117°48.5'	X-11	1351	1405	474	0-144	17	17
120.90	26°13'	118°27.5'	X-11	1951	2006	(478)	0-141	17	17
123.37	27°24'	114°39.7'	X-14	1348	1355	226	0-65	40	40
123.42	27°15'	114°59.9'	X-13	0526	0540	484	0-141	39	39
123.45	27°10'	115°10'	X-13	0346	0400	450	0-141	51	51
123.50	26°58'	115°30.5'	X-13	0016	0030	426	0-146	68	68
123.55	26°48.2'	115°49.7'	X-12	2116	2130	424	0-146	68	68
123.60	26°38.5'	116°08'	X-12	1716	1730	440	0-144	80	80
123.70	26°18.5'	116°47'	X-12	1101	1116	453	0-148	49	49
123.80	26°00'	117°29'	X-12	0346	0400	424	0-142	59	59
127.34	26°55.3'	114°06'	X-14	1858	1905	238	0-58	80	80
127.40	26°43.5'	114°29.5'	X-14	2236	2251	425	0-146	118	118
127.45	26°33.5'	114°48.7'	X-15	0201	0215	467	0-139	75	75
127.50	26°25'	115°09'	X-15	0456	0510	491	0-140	41	41
127.55	26°13.5'	115°27.2'	X-15	0821	0836	483	0-141	21	21
127.60	Occupied. Sample spoiled								
127.70	25°45.5'	116°23.2'	X-15	1701	1716	493	0-140	20	20
127.80	25°23.5'	117°02.7'	X-15	2306	2321	485	0-139	58	58
130.30	26°29'	113°29'	X-17	0803	0810	260	0-71	73	73
130.35	26°21.2'	113°48.7'	X-17	0451	0506	494	0-139	36	36
130.40	26°14'	114°03'	X-17	0156	0210	517	0-138	52	52
130.45	25°59.5'	114°27'	X-16	2216	2230	444	0-143	56	56
130.50	25°49'	114°46'	X-16	1836	1851	512	0-140	45	45
130.55	25°38'	115°03'	X-16	1546	1600	500	0-141	44	44
130.60	25°26.7'	115°24'	X-16	1151	1206	524	0-137	27	27
133.25	26°04.5'	112°48'	X-17	1548	1556	282	0-73	160	160
133.30	25°54.5'	113°07.5'	X-17	1826	1840	518	0-137	41	41
133.35	25°45.2'	113°23.2'	X-17	2121	2136	511	0-141	37	37
133.40	25°34.5'	113°45.5'	X-18	0146	0201	457	0-140	55	55

Plankton Volumes, Cruise 5810, October 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
133.45	25°24.5'	114°04.7'	X-18	0421	0430	476	0-140	31	31
133.50	25°14.5'	114°24'	X-18	0716	0730	481	0-138	37	37
133.55	25°05'	114°42'	X-18	1046	1100	(523)	0-139	27	27
133.60	24°56'	114°59'	X-18	1346	1400	507	0-139	43	43
137.23	25°34.2'	112°18.7'	X-19	1818	1825	264	0-59	314	314
137.30	25°20.5'	112°45.7'	X-19	1431	1446	487	0-145	45	45
137.35	25°13'	113°04.2'	X-19	1056	1111	520	0-143	15	15
137.40	25°03'	113°22'	X-19	0726	0740	509	0-142	12	12
137.45	24°50.8'	113°42.7'	X-19	0436	0451	476	0-139	25	25
137.50	24°40'	114°01.5'	X-19	0111	0126	520	0-139	48	48
137.55	24°30'	114°20.5'	X-18	2236	2250	516	0-141	134	134
137.60	24°20'	114°38.9'	X-18	1916	1931	501	0-142	50	50
140.30	24°45.5'	112°24'	X-20	0028	0036	344	0-82	99	99
140.35	24°36'	112°43'	X-20	0326	0341	522	0-140	42	42
140.40	24°25.5'	113°02'	X-20	0631	0646	522	0-141	23	23
140.45	24°16'	113°21'	X-20	0931	0946	526	0-139	19	19
140.50	24°05.5'	113°39.5'	X-20	1201	1216	555	0-140	11	11
140.55	23°47'	114°07'	X-28	0141	0156	484	0-146	17	17
140.60	23°37'	114°25'	X-28	0446	0501	481	0-144	31	31
143.26	24°19'	111°48'	X-21	1919	1924	225	0-46	49	49
143.30	24°11'	112°03'	X-21	0621	0636	514	0-142	25	25
143.35	24°01'	112°22'	X-21	0311	0326	533	0-140	34	34
143.40	23°51'	112°40.5'	X-21	0006	0021	529	0-140	17	17
143.45	Occupied. Sample spoiled								
143.50	23°31'	113°18'	X-20	1746	1800	585	0-136	41	41
143.55	23°19'	113°40.7'	X-27	2016	2030	506	0-144	40	30
143.60	23°07.5'	113°55.7'	X-27	1651	1706	507	0-143	12	12
147.20	23°56'	111°03.5'	X-22	0106	0119	466	0-127	105	105
147.25	23°46.5'	111°22.5'	X-22	0351	0406	529	0-139	38	38
147.30	23°36'	111°41.5'	X-22	0711	0726	498	0-139	18	18
147.35	23°26.3'	112°00.3'	X-22	1021	1035	524	0-139	11	11
147.40	23°16'	112°19'	X-22	1311	1326	525	0-138	17	17
147.45	23°06'	112°38'	X-22	1621	1636	510	0-145	24	24
147.50	22°56'	112°56.5'	X-22	1851	1906	530	0-139	38	38
147.55	22°46'	113°15.3'	X-22	2216	2230	529	0-137	28	28
147.60	22°36'	113°34'	X-23	0046	0100	505	0-139	91	91
150.19	23°23.7'	110°39'	X-24	1111	1126	519	0-140	46	46
150.25	23°11.5'	111°05'	X-24	0626	0640	504	0-144	38	38
150.30	23°04.2'	111°23.2'	X-24	0231	0246	524	0-141	42	42

Plankton Volumes, Cruise 5810, October 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
150.35	22°54'	111°41.2'	X-23	2341	2355	518	0-144	29	29
150.40	22°43.5'	111°59.2'	X-23	1956	2010	546	0-139	38	38
150.45	22°32.7'	112°17.7'	X-23	1641	1655	516	0-141	14	14
150.50	22°22'	112°35'	X-23	1306	1320	534	0-144	22	22
150.55	22°12'	112°54'	X-23	1036	1051	508	0-141	28	28
150.60	22°02'	113°13'	X-23	0711	0726	507	0-142	20	20
153.16	22°55'	110°07.2'	X-25	0436	0450	497	0-148	34	34
153.20	22°47.5'	110°22'	X-25	0721	0736	488	0-147	10	10
153.25	22°38'	110°42.5'	X-25	1116	1131	524	0-139	27	27
153.30	22°30'	111°02'	X-25	1411	1426	494	0-144	14	14
153.35	22°22.8'	111°23.5'	X-25	1751	1806	506	0-137	24	24
153.40	22°08'	111°37.2'	X-25	2101	2116	513	0-142	39	39
153.45	21°58'	111°55.9'	X-26	0026	0040	480	0-146	54	54
153.50	21°47.5'	112°14.5'	X-26	0316	0330	480	0-145	67	67
153.55	21°37.5'	112°33'	X-26	0636	0650	483	0-141	12	12
153.60	21°28'	112°53'	X-26	0931	0946	474	0-146	11	11
153.70	21°07'	113°28.1'	X-26	1501	1515	505	0-143	30	8
153.80	20°47'	114°05'	X-26	2026	2040	525	0-141	29	29

Plankton Volumes, Cruise 5811, November 1958

80.51	34°26.7'	120°31.5'	XI-21	1835	1840	163	0-42	31	31
80.55	34°18.8'	120°48.5'	XI-21	2121	2136	487	0-136	88	88
80.60	34°08.8'	121°09'	XI-22	0126	0140	479	0-132	288	288
82.47	34°14.7'	119°58.5'	XI-21	1406	1421	502	0-127	10	10
83.40	34°13.6'	119°21.8'	XI-21	0835	0836	69	(0-12)	(44)	(44)
83.43	34°08'	119°34.1'	XI-21	1056	1111	492	0-135	10	10
83.51	33°52'	120°07.5'	XI-22	1417	1429	383	(0-106)	(10)	(10)
83.55			Occupied. Sample spoiled						
83.60	33°34'	120°45'	XI-22	0711	0726	470	0-136	26	26
87.35	33°50.7'	118°36.8'	XI-21	0211	0226	543	0-127	28	28
87.40	33°40'	118°58.8'	XI-23	1126	1140	547	0-110	13	13
87.45	33°29.8'	119°18.3'	XI-23	0811	0825	450	0-138	4	4
87.50	33°20.2'	119°39.5'	XI-23	0523	0530	291	0-62	31	31
87.55			Occupied. Sample spoiled						
87.60	33°00'	120°21.5'	XI-22	2231	2245	479	0-137	92	92
90.28	33°28.3'	117°47'	XI-20	1931	1945	523	0-134	27	27
90.30	33°24.5'	117°55'	XI-20	1831	1846	522	0-131	17	17

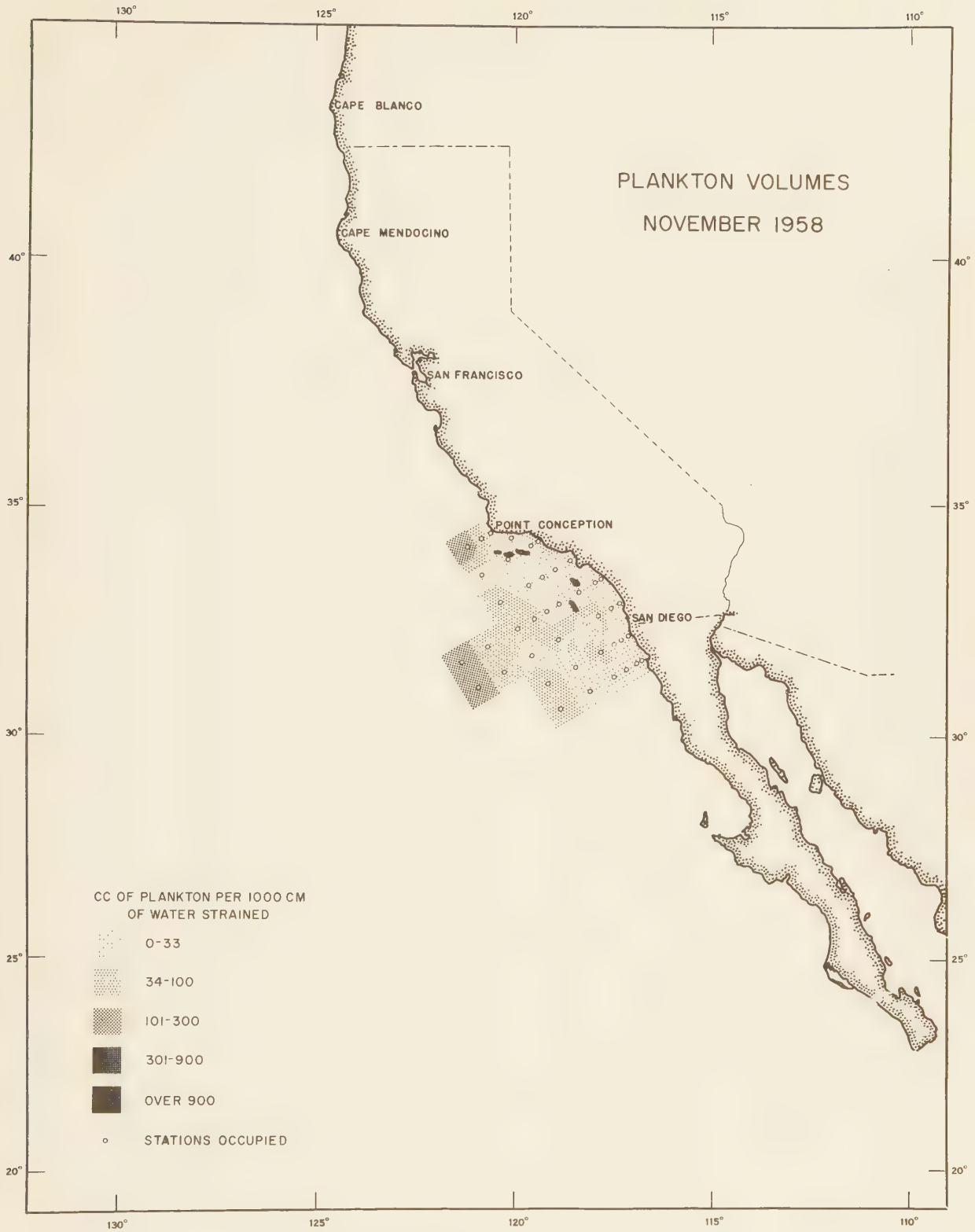

Figure 14.--Plankton volumes, November 1958.

Plankton Volumes, Cruise 5811, November 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
90.37	33°11.2'	118°23.8'	XI-20	1316	1330	511	0-123	4	4
90.45	32°49.7'	118°55.7'	XI-20	0636	0650	478	0-137	8	8
90.50	32°43.2'	119°15.8'	XI-20	0237	0248	407	0-88	17	17
90.55	32°34.7'	119°37'	XI-19	2331	2346	418	0-135	55	55
90.60	32°25.3'	119°57'	XI-19	1936	1951	477	0-134	65	65
90.70	31°53.6'	120°29.3'	XI-19	1221	1239	494	0-144	67	67
90.80	31°35.6'	121°09'	XI-19	0556	0611	465	0-137	273	273
93.27	32°54.5'	117°21.2'	XI-17	1203	1218	532	0-118	2	2
93.30	32°49.2'	117°30.7'	XI-17	1431	1446	526	0-119	10	10
93.35	32°39.5'	117°51.7'	XI-17	1826	1840	501	(0-131)	(34)	(34)
93.40	32°30'	118°12.5'	XI-17	2216	2230	524	0-131	90	90
93.50	32°09.1'	118°56.7'	XI-18	0506	0521	485	0-136	87	87
93.60	31°50.4'	119°33.8'	XI-18	1056	1111	406	0-133	27	27
93.70	31°30.7'	120°13.2'	XI-18	1716	1731	464	0-147	62	62
93.80	31°05.8'	120°51'	XI-18	2321	2336	495	0-140	131	131
97.30	32°15.5'	117°08.8'	XI-14	2011	2016	184	0-50	5	5
97.32	32°11.8'	117°16.2'	XI-14	1841	1856	506	0-117	16	16
97.35	32°06.2'	117°28.8'	XI-14	1641	1656	498	0-135	12	12
97.40	31°54'	117°48.6'	XI-14	1334	1348	506	0-126	47	47
97.50	31°34'	118°25.7'	XI-14	0816	0831	544	0-126	24	24
97.60	31°17'	119°06'	XI-14	0316	0330	504	0-135	48	48
100.29	31°42.2'	116°44.3'	XI-13	0036	0050	527	0-125	13	13
100.30	31°41.5'	116°46.7'	XI-13	0136	0151	573	0-125	14	14
100.35	31°31.6'	117°05.5'	XI-13	0506	0521	506	0-136	10	10
100.40	31°22.2'	117°23.3'	XI-13	0846	0901	484	0-140	4	4
100.50	31°01.2'	118°06.1'	XI-13	1436	1450	498	0-127	22	22
100.60	30°42.2'	118°43.7'	XI-13	2045	2100	481	0-138	73	73

Plankton Volumes, Cruise 5812, December 1958

80.51	34°26.6'	120°31.6'	XII-9	0347	0356	(292)	0-71	(51)	(51)
80.55	34°17.2'	120°48'	XII-9	0710	0725	563	0-138	32	32
80.60	34°05.8'	121°08'	XII-9	1116	1131	493	0-131	97	28
80.70	33°47.3'	121°46.8'	XII-9	1731	1747	545	0-138	46	46
80.80	33°27.5'	122°30.2'	XII-9-10	2356	0011	536	0-137	58	58
82.47	34°14.5'	119°57.8'	XII-8	2341	2356	575	0-103	38	38
83.40	34°12'	119°21.5'	XII-8	1954	1957	(110)	0-14	(55)	(55)
83.43	34°07.2'	119°35.2'	XII-8	1751	1806	498	0-140	30	30

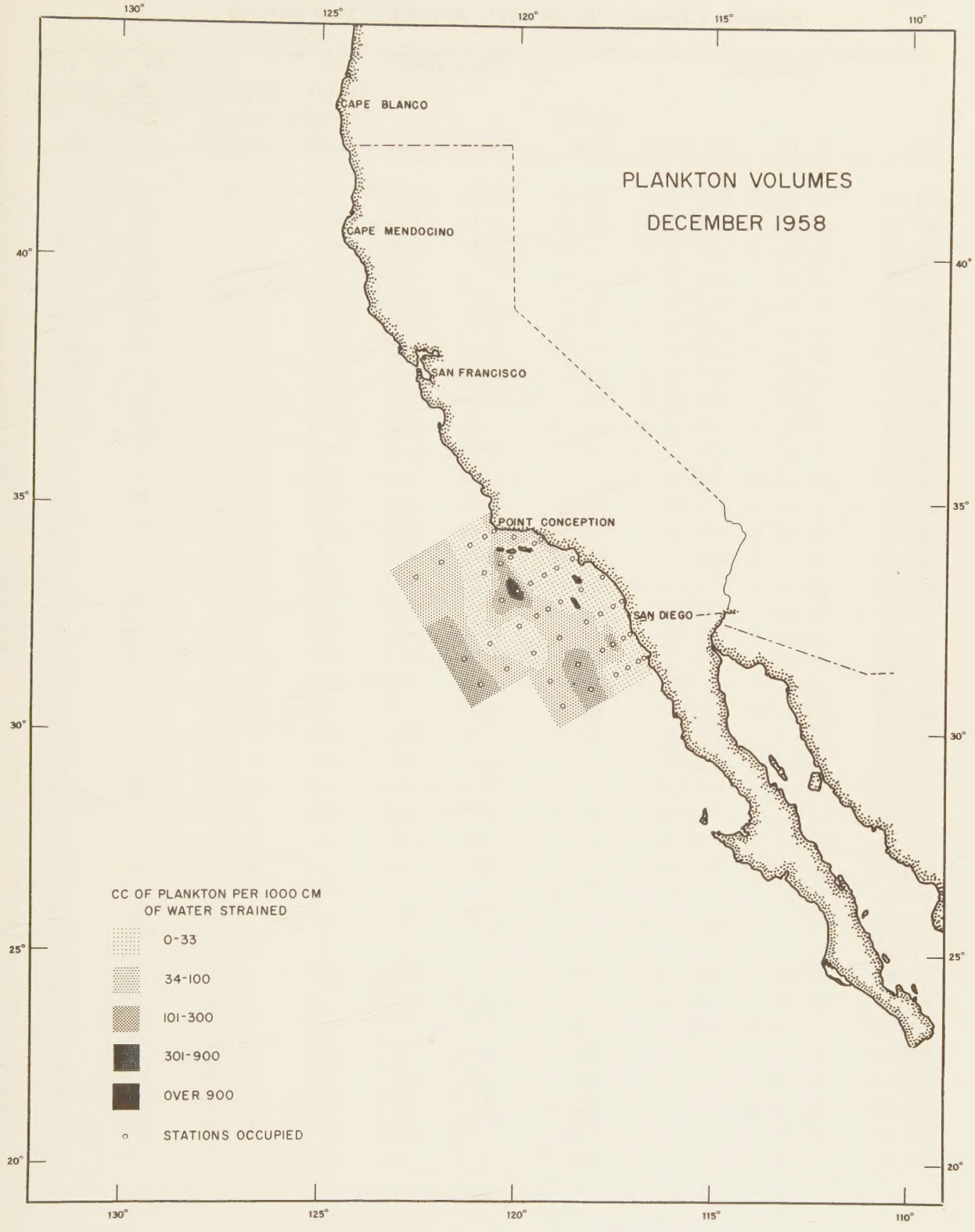

Figure 15.--Plankton volumes, December 1958.

Plankton Volumes, Cruise 5812, December 1958 (cont'd)

Sta.	Position N. lat.	W. long.	(1958) Date	Time (PST) Start	End	Vol. water strained C.M.	Depth of haul in meters	Vol. per 1000 C.M. strained Total cc.	Sm. org. cc.
83.51	33°51.8'	120°07.5'	XII-8	1307	1318	383	0-99	5	5
83.55	33°44'	120°24.5'	XII-8	1036	1051	496	0-132	131	131
83.60	33°33.4'	120°45.9'	XII-8	0736	0751	509	0-138	29	29
87.35	33°50'	118°37'	XII-7	1051	1106	515	0-129	33	33
87.40	33°39.2'	118°57.2'	XII-7	1356	1411	492	0-135	10	10
87.45	33°28.5'	119°20'	XII-7	1626	1641	(497)	0-141	(12)	(12)
87.50	33°20.4'	119°40'	XII-7	1912	1919	214	0-57	33	33
87.55	33°09.2'	120°00.2'	XII-7	2141	2156	500	0-133	854	854
87.60	33°00'	120°21.5'	XII-8	0126	0140	476	0-137	113	113
90.28	33°28.4'	117°46.7'	XII-11	0431	0446	(506)	0-140	(12)	(12)
90.37	33°09.2'	118°25'	XII-7	0546	0600	484	0-142	17	17
90.45	32°51.5'	118°53.5'	XII-7	0016	0030	492	0-135	24	24
90.50	32°40.5'	119°13.3'	XII-6	2058	2113	523	0-132	38	38
90.55	32°32.5'	119°31'	XII-6	1830	1844	495	0-142	49	49
90.60	32°23.5'	119°54.8'	XII-6	1511	1526	512	0-134	12	12
90.70	32°04'	120°33.5'	XII-6	1006	1021	515	0-132	912	29
90.80	31°45'	121°14'	XII-6	0434	0449	494	0-141	200	200
93.27	32°54.5'	117°22'	XII-4	1313	1327	518	0-128	6	6
93.30	32°50'	117°31'	XII-4	1531	1545	492	0-132	2	2
93.35	32°39.7'	117°51.5'	XII-4	1851	1905	488	0-141	20	20
93.40	32°29.1'	118°11.5'	XII-4	2239	2254	509	0-131	47	47
93.50	32°08.2'	118°51.5'	XII-5	0540	0555	496	0-141	38	38
93.60	31°45.8'	119°31.5'	XII-5	1126	1141	507	0-132	28	28
93.70	31°30'	120°15'	XII-5	1716	1730	505	0-136	54	54
93.80	31°10.5'	120°53'	XII-5	2246	2301	523	0-129	187	187
97.30	32°14.2'	117°08'	XII-3	1338	1344	221	0-54	3	3
97.32	32°10.8'	117°16'	XII-3	1211	1225	(517)	0-128	(15)	(15)
97.35	32°05'	117°27.5'	XII-3	1016	1031	526	0-131	143	143
97.40	32°00'	117°51.2'	XII-3	0741	0755	489	0-140	39	39
97.50	31°37'	118°32'	XII-3	0211	0225	544	0-130	119	119
97.60	31°16.5'	119°08.5'	XII-2	2125	2140	496	0-134	91	91
100.29	31°41.8'	116°43.8'	XII-1	2146	2201	543	0-128	11	11
100.30	31°40.8'	116°46.5'	XII-1	2251	2306	527	0-125	6	6
100.35	31°29'	117°07.5'	XII-2	0146	0200	503	0-139	28	28
100.40	31°18'	117°28.5'	XII-2	0436	0450	512	0-142	12	12
100.50	30°54.2'	118°11'	XII-2	1036	1051	533	0-131	128	128
100.60	30°41.5'	118°45'	XII-2	1521	1535	507	0-135	34	34

GPO 906740